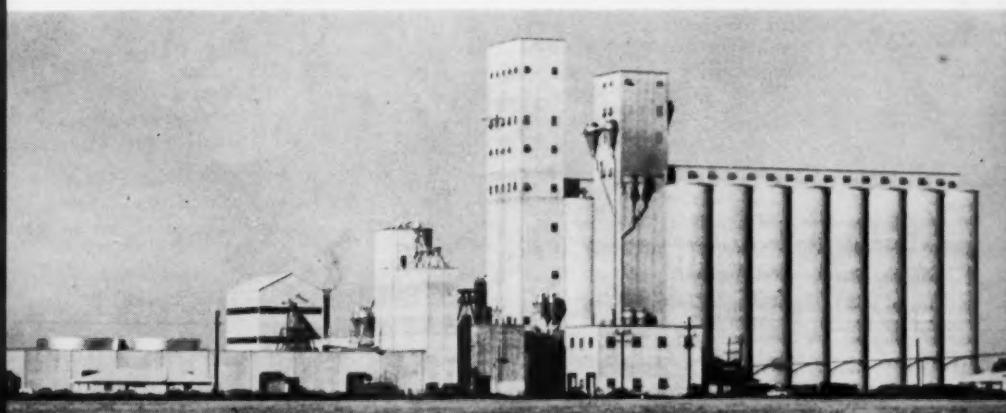


# THE *Soybean Digest*



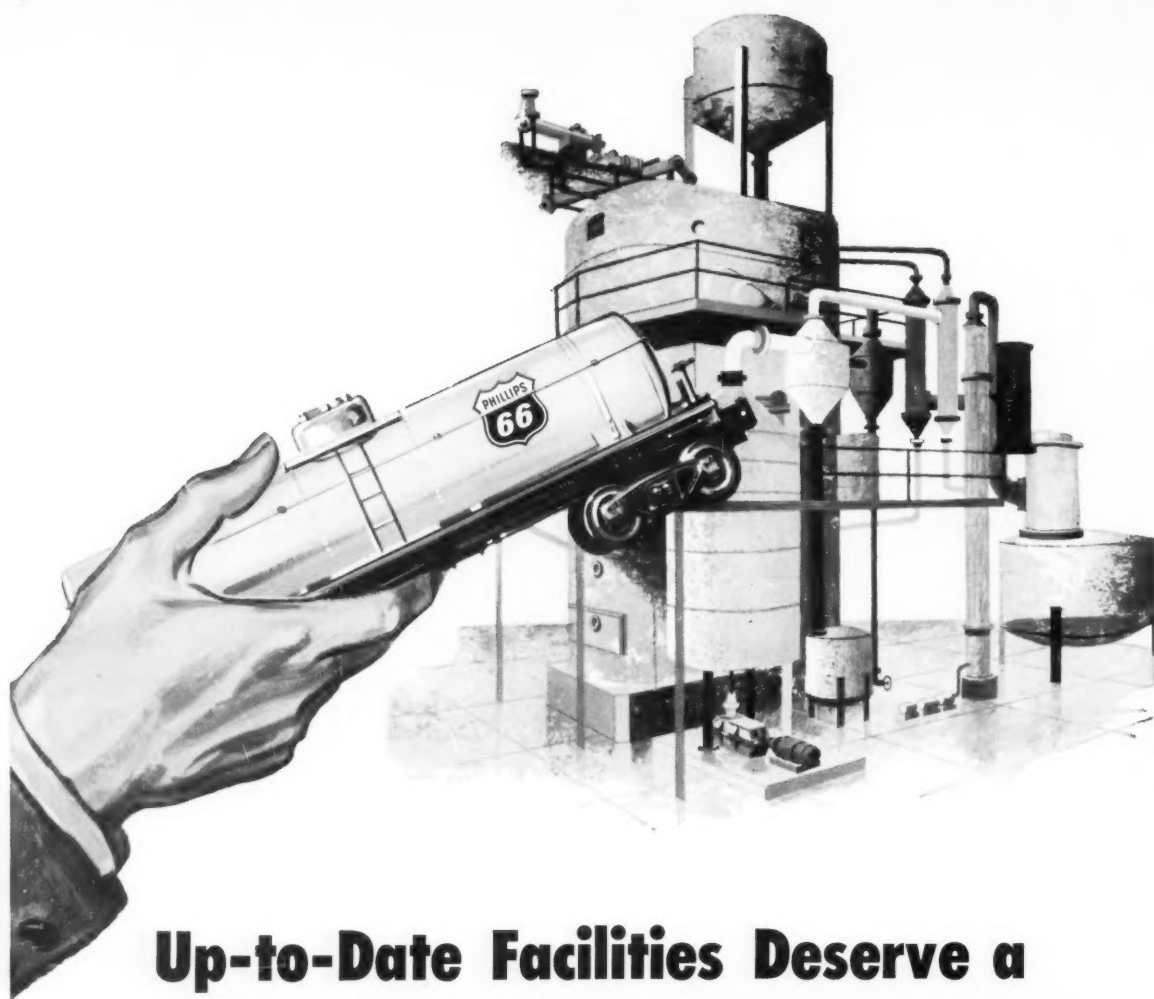
## One of the South's Largest Soybean Processing Units

HEADING UP the recently opened \$3 million soybean enterprise at Stuttgart, Ark., left to right: L. C. Carter, general manager; W. F. Carle, manager of the soybean division; O. A. Meredith, construction superintendent; F. M. Bloomberg, plant superintendent; A. F. Knoll, secretary-treasurer; Clark Smith, sales manager; and H. K. Smith, Jr., Wheatley, Ark., president. Below is the plant, showing storage and extraction units. (See page 7)



FEBRUARY • 1961

VOLUME 21 • NUMBER 4



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Official Publication of American Soybean Association and  
Soybean Council of America, Inc.

HUDSON, IOWA

**Vol. 21                      February, 1961                      No. 4**

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## THE SOYBEAN DIGEST

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**Objectives of the American Soybean Association** include the bringing together of all persons interested in the production, distribution and utilization of soybeans; the collection and dissemination of the best available information relating to both the practical and scientific phases of the problems of increased yields coupled with lessened costs; the safeguarding of production against diseases and insect pests; the promotion of the development of new varieties; the encouragement of the interest of federal and state governments and experiment stations; and the rendering of all possible services to the members of the Association.



## EDITOR'S DESK

. . . By GEO. M. STRAYER

**IS BEAN PRICE AT PEAK?** Since last September it has been known that the supply of soybeans for consumption during the current crop year would not be adequate to meet all needs and allow normal carryover, assuming continuation of current price levels. Recently the speculators have learned this and the market gyrations have been the result.

A price rise from harvest time through the winter and spring months is normal. Without it there would be no incentive to place soybeans in storage on farms or at country points. The present price rise represents more than the normal rise—it represents speculative belief that we will run out of supplies before the new crop is harvested. End product prices have not kept pace. Either they must move upward—or soybeans must move down.

Exports of soybeans are already slowing down. Present prices are not nearly so attractive to export buyers as those of last November. Other commodities will replace soybeans in the export market to the extent available at competitive prices. Soybean oil at present prices is certainly more representative of true values than the prices of a year ago. But resistance to buying is already building up.

**AS THE PATTERN EMERGES** As the New Frontiers of the Kennedy Administration begin to emerge the pattern of American Agriculture, so far as determined by government, will unfold in coming weeks. Among them undoubtedly will be bold efforts to bring the production and consumption patterns of feed grains into balance. This should be done. No longer can we continue to produce far more than we can sell.

Stories emanating from Washington indicate attempts to transfer as much as 10 million acres from feed grains to soybeans. If carried out, such moves could only result in disaster for soybeans. Through a period of years the policies followed by our industry have enabled us to expand our crop from 180 million bushel production at the end of World War II to the present 550-million-bushel production and build markets as our crop has expanded. We want to continue that expansion. But we must do it slowly and steadily, expanding production to keep up with the markets developed.

Undoubtedly we need an additional 2 or 2½ million acres of soybeans in 1961. We can sell the crop from 25 million acres this year. We want a chance to do so. But too rapid expansion—either by a support price too high, by selling prices too high or by forcing acreage out of other crops into soybeans—can only result in too many acres—too

many bushels—too many problems. The CCC would own large soybeans stocks, the support price would become the selling price, the play of the free market would be lost, our years of work would be forgotten.

We must not allow the problems of surplus commodities to be shifted to our crop too rapidly.

**RELATION OF BEANS TO CORN** The next few weeks and months will be interesting ones, so far as soybeans are concerned. No one can say, until we know the programs developed for corn, wheat and cotton are announced, what we should have for soybeans. Our crop competes for acreage with one of these three crops in most areas. In each case the basic decisions will be made on the other crops and until we know the programs announced we cannot make sound plans for soybeans.

In a year when soybeans are selling far above support prices the new crop support may have little influence on acreage planted. It has been our Association position through a period of years that support prices should be used as disasters insurance only. Certainly, that is the case this year. But they normally do influence acres planted. Whenever soybeans go below 1.8 times the price of corn, on a per-bushel basis, soybean acreage has moved downward. Whenever soybean support prices have been above 1.8 times the price of corn we have had soybean acreage increases.

On this basis we need a corn-soybean price relationship of about 1:1.8 for 1961 to assure the needed acreage of soybeans without disrupting markets. On \$1.20 per bushel corn supports this means \$2.16 soybeans. But it also means restrictions on acreage removed from corn being planted to soybeans! Without such restrictions we doubt the wisdom of any increase in soybean price support levels in 1961. Reduction of corn acreage by 10% in Iowa alone would transfer 1.1 million acres to soybeans! Use of the reduced acres must be on a restricted basis or we are headed for real troubles!

**LOW CCC STOCKS HEALTHY** Sales policies on CCC stocks of soybeans have now become of little consequence. With total CCC stocks reduced to 291,000 bushels in the recent USDA stocks report, there will be no governmental stocks of soybeans hanging over our heads!

Wisely, the stocks were not used to deplete prices, but were fed into the market place on a rising market in a manner not reflected back to the farm level. This is a very healthy situation, and CCC officials are to be complimented on their action.



# USDA Rules on Crotalaria

THE U. S. DEPARTMENT of Agriculture has announced that the presence of seeds of crotalaria must be shown in inspection certificates issued after Feb. 6 under the U. S. Grain Standards Act if there are more than two seeds of crotalaria in 1,000 grams (about 2.2 pounds) of grain.

This is the result of an interpretation of the Grain Standards which provides that the term "distinctly low quality" when used in the official grain standards of the United States, shall be construed to include grain which contains more than two crotalaria seeds in 1,000 grams of grain, and such grain shall be placed in "sample grade." "Sample grade" is the lowest grade under the grain standards.

The reason for this action is that crotalaria seed is toxic. To date, crotalaria seed has been found in limited shipments of corn and soybeans in the Southeast. It can be removed by cleaning. Farmers and handlers are urged not to feed or market grain which they believe contains crotalaria seed.

Crotalaria seed has been found in corn and soybeans harvested in the Southeastern States where it has been used as a cover and green manure crop for a number of years. The reappearance of crotalaria in some fields results from the fact that shattered seeds of crotalaria may germinate years after they were plowed under. Thus, though crotalaria may not have been planted recently, it may appear as voluntary plants in grain crops.

Since crotalaria first became suspect East Coast processors have been conducting a vigorous campaign to eliminate it from the soybean crop. Most processing firms have bought only beans free of this toxic seed. Other processors, with appropriate cleaning equipment, have cleaned any beans found to contain crotalaria. "Regardless of the method used to assure clean beans, the paramount consideration has been to make sure the buyers of our products receive meal and oil which is free of any toxic substance," says Tom Veblen, Cargill, Inc., account manager, Norfolk, Va.

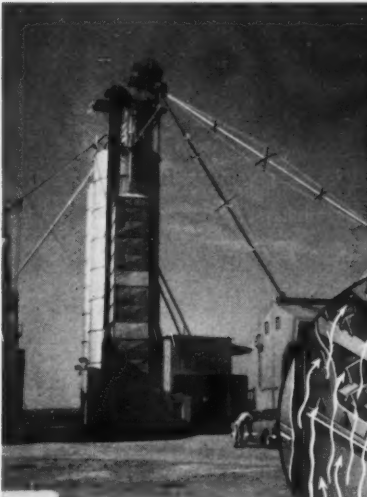
"This year, at Norfolk, Cargill rejected 12 trucks and several cars which were found by the state of Virginia inspection department, in their usual inspection of all inbound shipments, to contain crotalaria," Mr.

Veblen says. "By following this policy of rejection we caused our shippers some temporary inconvenience and expense, but all of us who handle beans in this area recognize soybeans intended for human or animal consumption must not be contaminated with crotalaria if we are to retain our markets.

"We feel the situation is under control."

## Soybean Cargo Sets New Seaway Record

A HUGE cargo of soybeans, 721,115 bushels, from Minnesota and the Red River valley of North Dakota, set an alltime Great Lakes and St. Lawrence Seaway record. The cargo was loaded Nov. 10 at Duluth and Cargill, Inc.'s Itasca elevator in Superior, Wis., on the Frank A. Sherman. The previous record was 645,000 bushels on the J. O. McKellar earlier in the year.



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## Judd Is New Head of Crop Council

THE NATIONAL Soybean Processors Association announces that Robert W. Judd has joined the Association as managing director of the Association's National Soybean Crop Improvement Council, effective Feb. 1. Mr. Judd succeeds J. W. Calland who has been managing director of the Council since its inception in 1948. Mr. Calland is retiring but has consented to continue in an advisory capacity for a limited period.

Mr. Judd for the last 3 years has served as county extension director for Iowa's Cerro Gordo County. Previously, Mr. Judd had extensive farm management and farming experience. He is a veteran of World War II and served as a captain in the Air Force. He has been active in Iowa agricultural and community services. Mr. Judd is a graduate of Iowa State University.

The Council under Mr. Calland's

capable leadership has worked closely with agronomists and growers to expand the areas of production and increase the yields of soybeans. An advisory board composed of agronomists from the 22 leading soybean producing states and the U. S. Department of Agriculture assists the Council at the present time. Present plans contemplate a continuation and expansion of this important NSPA activity.

Mr. Calland went to Decatur, Ind., late in 1928 as field manager for the Holland-St. Louis Sugar Co., later becoming vice president of its successor, the Central Sugar Co., and agronomist for the Central Soya Co. He has maintained his office for the National Soybean Crop Improvement Council in Decatur.

Mr. and Mrs. Calland are both well known at American Soybean Association conventions which they have attended for many years. Mr. Calland is an honorary life member of ASA. They will continue to live at Decatur, where in his words, "We hope to work a little, play a little, do some traveling, visit with our grandchildren and generally just enjoy living."



## We Are Proud

... to have played a part in the new Arkansas Grain Corp. Soybean Processing Plant, and extend our congratulations to this fine Stuttgart firm.

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Processing Plant  
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## 8 Million Bu. Unit at Stuttgart

THE \$2 MILLION solvent extraction soybean processing plant of Arkansas Grain Corp. was opened on a 25-acre tract east of Stuttgart, Ark., Oct. 15. The plant has been called the South's largest single unit soybean operation.

Including the elevator facilities, value of the plant is \$3.2 million. Processing capacity of the new plant is now 8 million bushels, but this can be expanded to 10 million bushels.

Counting the Stuttgart operation, the Soybean Blue Book lists 11 soybean processing plants in the state, including several that process both cottonseed and soybeans.

The corporation will establish

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## Newest Soybean Processing Plant In The MID- SOUTH



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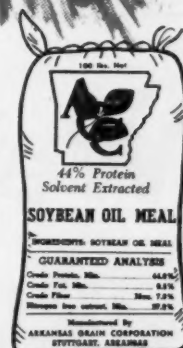


### — Products —

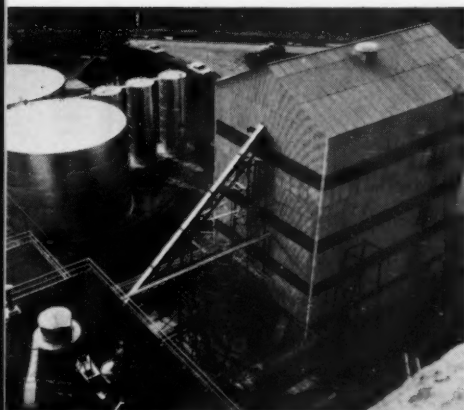
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—Photo Courtesy Arkansas Democrat

BIRDSEYE VIEW of extraction plant and oil storage of Arkansas Grain Corp. Tanks hold 1.06 million gallons of soybean oil.



both domestic and foreign markets for its products which will include 50% and 44% protein soybean meal, soybean pellets and mill feed, and crude soybean oil and lecithin. The 50% meal is aimed at supplying Arkansas' vast poultry industry.

French Oil Mill Machinery Co. designed and furnished the major part of the equipment.

The giant drier, furnished by Aeroglide Corp., Raleigh, N. C., will dry at the rate of 1,500 bushels of soybeans per hour.

The grain elevator can unload from four different railroad tracks.

Oil storage tanks have a capacity of 1,060,000 gallons. There is a two-story preparation building.

The plant employs 55 people.

The Arkansas Grain Corp.'s new soybean processing plant lies in the heart of an area that has come up fast in soybean production. Arkansas produced over 54.5 million bushels of soybeans in 1960 and stood fourth in the nation, behind only Illinois, Iowa and Indiana. The acreage devoted to soybeans in Arkansas is now greater than the acres for cotton and rice. And the greatest part of Arkansas production lies in the Delta area served by Arkansas Grain Corp.

The Stuttgart processing plant is owned by the 4,000 members of the Arkansas Grain Corp., which was formed in 1958 as a processing and marketing group. The corporation was established as a sister organization of the Arkansas Rice Growers Cooperative Association, which has been a successful marketing organization for Arkansas rice farmers for many years.

L. C. Carter is general manager of both organizations. He is also a member of the Federal Farm

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FIRST CARLOAD of soybean oil processed went to Little Rock division of Safeway Stores. Left to right, Gerald Maulding, public relations director; Paul Dugan, advertising manager; and Mr. Hunting, division manager for Safeway. And the first load of meal went to Arkansas Vai Industries. Left to right, Ken Parker,



public relations director for Ark Vai Industries, and S. D. Mitchell, vice president, both of Dardanelle, Ark.; and L. C. Carter, manager of Arkansas Grain Corp. Arkansas Vai Industries is the largest integrated poultry firm in the Arkansas Valley.

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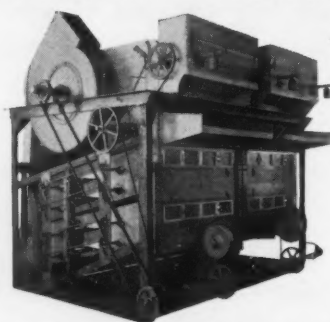
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**STORAGE** bins at left. Arkansas Grain has almost 8 million bushels storage for soybeans at 14 points.

Credit Board and chairman of the board of trustees of the University of Arkansas.

H. K. Smith, Jr., of Wheatley is president of both Arkansas Grain and Arkansas Rice, and A. F. Knoll of Stuttgart is secretary-treasurer. W. F. Carle is manager of the soybean division and Clark Smith is general sales manager.

Fritz M. Bloomberg was the engineer who drew the plans and supervised construction. He will remain as plant superintendent.

O. A. Meredith of Stuttgart was construction superintendent. Herbert Martin of Hazen was assistant superintendent.

Soybean storage facilities built under the auspices of the Arkansas Grain Corp. have been built at the following 14 cities: Hazen, Weiner, McGehee, Lonoke, Des Arc, Wheatley, Fair Oaks, Dumas, Hickory Ridge, Jonesboro, Corning, Tuckerman, Stuttgart, and Marianna.

### Developing Soybean Varieties for Alberta

JOINT experiments aimed at developing suitable varieties of soybeans for the province of Alberta, Canada, are being carried on by Western Canadian Seed Processors, Ltd., Lethbridge, and the Alberta Experiment Station, according to newspaper reports.

Soybeans are not yet grown in the province commercially.

A \$3.5 million extraction, refining and hydrogenating plant was opened by the company at Lethbridge several months ago. The firm is processing rape and sunflower seeds grown on contract by Alberta farmers.

The processing firm with the experiment station are planting new varieties of soybeans in test plots to explore their suitability for Alberta.

## THE NEWS IN BRIEF

### THE CROP, MARKETS AND OTHER ITEMS OF NOTE

#### New High In Fats Production

World production of fats and oils in 1961 is expected to continue the post-war upward trend and reach a new high of 32.5 million tons, the U. S. Department of Agriculture reported in late January. This would be almost a million tons or 3% more than the 1960 record and almost a third larger than the 1950-54 average. The United States produces about one-fourth of the world's fats and oils and is expected to account for almost a fifth of the increase in 1961.

Some expansion is foreseen in all five categories of fats and oils, with the most significant in the edible oils, says USDA.

The outturn of edible vegetable oils in 1961 — processing mainly from oilseed crops harvested in 1960 — is expected to total an all-time high of about 13.3 million tons, exceeding the 1960 output moderately and the previous record in 1959 by a slight margin. The expected increase is due to the sharp expansion in 1960 sunflower seed production, the moderate expansion in peanut and sesame seed production and the slightly larger soybean and cottonseed crops, which are offset partially by the sharp decline in olive oil outturn.

#### Common Market Report

Developments taking place in the European Common Market are not likely to expand European outlets for U. S. fats and oils, but probably will encourage U. S. exports of oilseeds and meals, USDA stated in another report.

"The proposed tariff structure favors imports of oilseeds rather than oils. The probable increase in consumption of fats and oils in the Common Market can be fully met by the expected increase in output of animal fats within the Market area . . . **Rising demand for protein feed in the Common Market**, reflecting expanding consumption of animal products, will provide an excellent outlet for U. S. soybeans and oilseed meals," says USDA.

The Common Market has proposed the following external tariffs of primary interest to the United States: All oilseeds and oilseed meals will be admitted free of duty. Crude soybean and cottonseed oil for edible use will bear a 10% duty while that on crude linseed oil will be 5%. The duty on processed oils will be higher. Lard will have a 20% duty, margarine 25%, butter 24%, and edible tallow 10%.

The Common Market plans to protect domestic commodities such as lard and butter in which they hope to be self-sufficient, and, wherever possible, to import raw materials for processing rather than processed or finished products. Olives and rapeseed are the only oilseeds grown in quantity in Common Market countries.

#### Substantial Bean Crop Movement

The movement from farm stocks of soybeans was heavy in nearly all areas in January due to the higher market, according to our reports. Selling was particularly heavy in Iowa and Minnesota. A Webster County report was that farmers were still holding 25% of the crop and would sell at \$2.30 or above. Leo C. Lester, Worthington, Minn., said a large part of the stored beans had been sold in his area during the month. Farmers were selling on every advance but holding when the market reacted.

Quoting Jake Hartz, Jr., Jacob Hartz Seed Co., Stuttgart, Ark.: "It is our opinion there are less soybeans on the farm throughout this area than any time in the last 5 years at this date. I am of the opinion this holds true from southeast Missouri, throughout Arkansas, Louisiana, and Mississippi."

And quoting L. H. Simerl, University of Illinois department of agricultural economics: "The 1960 crop has now been recognized as a short crop. And this reminds us of that old saying in the grain trade: 'A short crop has a long tail.' The interpretation is that prices for short crops tend to reach their seasonal peaks earlier in the marketing year than do prices for normal and large crops."



**Meeting  
With Sec'y  
Freeman**

The American Soybean Association was one of a large number of farm groups represented in the farm policy meeting with U. S. Secretary of Agriculture Freeman in Washington Jan. 26. ASA President Charles V. Simpson and Executive Vice President Geo. M. Strayer speaking for the soybean crop and industry, stated in a brief filed with USDA: "Producers of soybeans ask no additional help from government and want nothing more than to be allowed to further expand markets for their commodities and to expand production commensurate with the market's ability to absorb the end products."

Stated objectives of the American Soybean Association include price supports at a level that will provide soybean producers with protection through loan or purchase agreement, and still encourage them to market their commodity without creating burdensome accumulations in government storage.

**January  
Export  
Business**

USDA announced a supplemental agreement with the United Arab Republic (Egypt) to finance sale of \$3.9 million worth (about 33 million pounds) of cottonseed or soybean oil under P. L. 480, payment to be in Egyptian currency.

USDA announced issuance of an authorization under the agreement to finance the purchase of \$2.2 million worth of cottonseed or soybean oil, or about 7,000 metric tons in bulk, drums or bags. Sales contracts are to be made between Feb. 2 and July 31, and delivery by Aug. 31.

International Cooperation Administration reported an authorization to Spain for \$1.5 million worth of oilcake and meal, (increased to \$3.5 million) the contracting period to be between Dec. 6 and Mar. 31, and terminal delivery date May 31.

ICA has issued an authorization to Greece for purchase of \$15 million worth of U. S. cake and meal, the contracting period to be between Dec. 6 and Mar. 31 and the terminal delivery date May 31.

ICA has also issued an authorization to Israel for purchase of \$4.4 million worth of soybeans, contracting period between Dec. 19 and Apr. 30, and terminal delivery date June 30.

The Spanish Ministry in Madrid rejected all offers against a 10,000-metric-ton vegetable oil tender Jan. 17, but is expected to have another oil tender shortly, and also to be in the market for dollar purchases in coming weeks.

It is reported that the Tariff Commission has recommended that the tariff on imports of flaxseed and linseed oil be reduced from the present 50% ad valorem to 15%. Also recommended was an abandonment of the present fee of 25% on all imports of peanut oil over 80 million pounds. Whether the recommendations will be followed is subject to the discretion of the President.

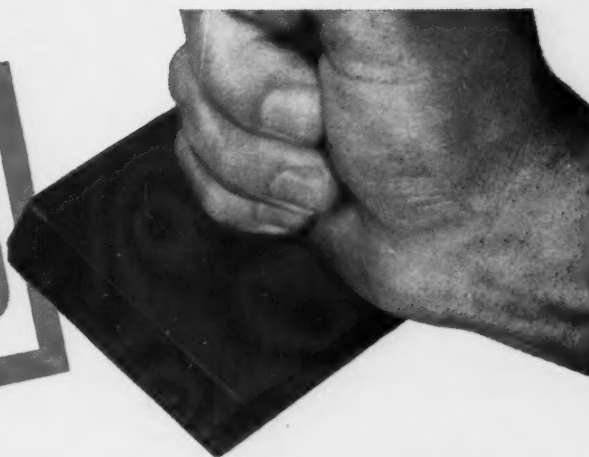
**Soybean  
Research  
Grant**

A grant totaling more than \$51,000 has been awarded to an institute in Scotland for a study of starches in soybeans, USDA reports. The Scotch grant for 18,240 pounds sterling goes to the University of Edinburgh for a study of the amount of starches in fat-free soybean meal. The information is needed to expand the utilization of U. S.-grown soybeans by improving the processing of soybean meal for foods and feeds.

The study will be conducted over a 4-year period. The grant was awarded under a program financed by foreign currencies accruing to the credit of the United States from the sale abroad of surplus agricultural commodities under P.L. 480. The research is administered by the foreign research and technical programs division of USDA's Agricultural Research Service.

The Farmers Grain Dealers Association of Iowa went on record in favor of introducing in the current session of the Iowa legislature a soybean check-off measure to provide funds for research and market development work, the Association's annual meeting in January.



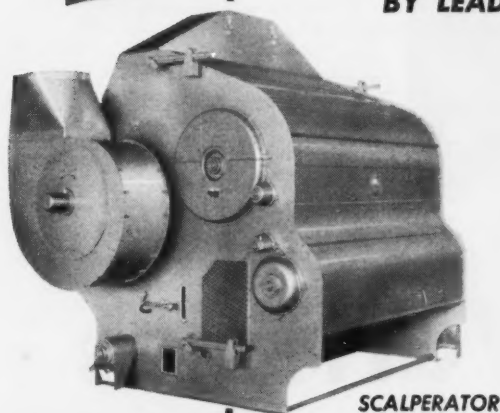


BY LEADING HANDLERS AND PROCESSORS

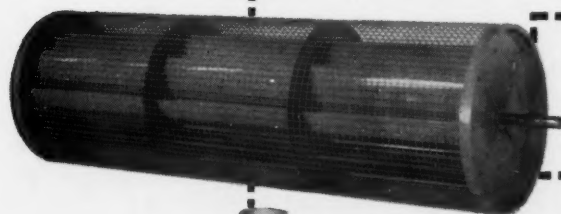
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# EFFICIENT SCALPING AND ASPIRATION



—Photo by Kent Pellett

**A SECRET** of success in soybean production is planting only certified seed of recommended adapted varieties. Here Iowa State University agronomist C. R. Weber examines soybean plants in nursery at Galva-Primghar experimental farm near Sutherland, Iowa.

**Agronomists recommend, state by state:**

# The Best Varieties

"ALL LINKS in the chain that makes farming a success are important, but the one that is often weak is the seed link," says George Dungan, University of Illinois professor of crop production emeritus in Busey First National Bank Farm Notes, Urbana, Ill.

"Even if high-powered equipment is used to prepare the land well, and plenty of plant food has been applied, crop yields can be a disappointment unless the right seed is used," says Dr. Dungan. "Choice of seed involves two considerations: first, selecting the best adapted variety; and second, getting high quality seed of the chosen variety."

For profitable results only high-yielding varieties that are adapted to your particular locality and so far as possible resistant to prevalent diseases should be grown.

Soybean varieties are especially sensitive to changes in latitude, and some are better adapted than others to local conditions. The map on page 17 shows in a general way the latest recommendations of agronomists in the soybean belt. For further suggestions concerning varieties for your immediate locality contact your

county agent or state extension service.

Planting quality seed is just as important as planting an adapted variety. Your state crop improvement association is an organization of farmers and seedsmen who cooperate with the state experiment station in producing and making available high quality seed of known origin, and which is disease-, weed-, and mixture-free.

There are many advantages to planting certified seed that make it well worth its small additional cost.

Certified seed is:

- 1—Adapted to the soil and climatic conditions of the state where certified.
- 2—More resistant to adverse conditions such as drought, heat, insects, and diseases.
- 3—More uniform in growth and maturity.
- 4—More dependable, reducing the chance of crop failure.
- 5—Producers of higher yields of better quality crops.

Clean seed and strong seedlings mean quicker growth and less trouble with weeds. These advantages provided by certified seed will

cut the cost of production and increase your net profits.

Only seed of adapted recommended varieties can be certified. All certified seed is labeled with the tag of the state crop improvement association. If it does not carry this label, it has lost its identity as certified seed.

See the list of seed sources in the "Seed Directory" on page 32 of this issue. Or contact your state crop improvement association for seed sources in your area.

The following information on varieties by states has been supplied by experiment station agronomists. Information from additional states was carried in the February 1960 Soybean Digest, if you still have a copy of that issue available. Remember that varieties do not perform the same in all areas.

For individual variety descriptions see "Leading Soybean Varieties" for Northern and Southern States beginning on page 18.

## Arkansas

**Lee.** Grown on about 70% of the state's acreage. The best adapted variety in central and southern areas. Produces high yields and

shatters less than other available varieties. Adapted to all soil types. Matures about Oct. 20 to 25 under average conditions.

**Hood.** A yellow-seeded variety released to replace the green-seeded Ogden types. Of same maturity as Ogden. Shatters less than Ogden, but more than Lee.

**Hill.** A new early variety that matures about Oct. 1. Yields slightly more than Dorman. Generally lodges less and produces better quality seed than any of the early varieties in Arkansas. Performs best in north-east and central Delta areas.

**Jackson.** Adapted in central and southern Arkansas. Matures 10 days to 2 weeks later than Lee, but has not yielded more than Lee when planted in May or early June. Yields slightly higher than Lee at extremely late dates of planting. Also recommended where growers want more growth than is provided by Lee.

Other varieties such as Dortchsoy 67, Ogden and Ogden selections, and Roanoke are rapidly being replaced by newer varieties. Dortchsoy 67 is susceptible to some foliar diseases and shatters severely under hot, dry conditions. Ogden has poor shatter resistance in addition to its green cast. Roanoke lodges badly and is susceptible to many diseases in Arkansas.

### Delaware

**Wabash** is the oldest variety recommended in Delaware. It is still on the list due to Clark's susceptibility to pod and stem blight.

**Clark** is adapted in the whole state. Outstanding for high yields, but seed quality is greatly affected by adverse climatic conditions.

**Kent** is a new high-yielding variety expected to replace most of the Wabash and Clark acreage. It is a high oil soybean and produces grain of higher quality than Clark.

**Bethel** is a new variety highly resistant to the root knot nematode. Control of this pest can be gained by growing Bethel 2 years. High yielding and gives high protein, high quality seed.

**Hill** is a new variety adapted to southern Delaware requiring a fairly long growing season. Excellent yields have been obtained. There is a tendency to seed too heavily since Hill seed are small.

**Hood** is adapted to southern Delaware and should replace some of the Ogden acreage. It is a full season soybean of high quality and produces high yields.

### Georgia

About 75% of the soybeans in

Georgia are grown in a double cropping system following small grains. Best yields are usually obtained when planted as a full season crop between May 5 and June 10. However, if a long season variety is used in the double cropping system, good yields can be expected with proper cultural practices.

**Lee.** Adapted to the upper half of the state as a full season crop. Best yields are obtained on reasonably fertile soils not especially subject to drought.

**Hill.** An early variety adapted to the Mountain and Limestone Valley areas.

**Jackson.** Best adapted as a full season variety, but may be planted following small grain. Frost damage frequently occurs in the Mountain region.

**Bienville.** Like Jackson and CNS-4, adapted to late plantings in the Piedmont and Coastal Plains.

### Kansas

**Clark.** Well adapted to all Kansas soybean producing areas. Yields better than any other recommended variety. Stands well and does not shatter. Earlier in maturity than S-100 and does not lodge as badly.

**S-100.** Recommended for planting in southeast Kansas. A full season variety, about 2 weeks later than Clark. Lodges badly compared with Clark and Wabash. Yield potential high in favorable seasons.

**Wabash.** Matures about same time as Clark and has other similar agronomic characteristics. Recommended in same areas. Good seed quality but yield potential not as high as Clark.

**Perry.** Adapted to central and southeastern Kansas. High yield potential but lodges more than Wabash and Clark. Seed quality lower than that of other recommended varieties.

### Maryland

Group IV maturity:

**Clark.** Major problems are pod blight and purple stain. Seed size, lodging resistance, plant type, and yields very satisfactory.

**Wabash.** Relatively free of disease; not quite as high in yield as Clark, good quality seed, reliable variety.

**Kent.** New release excellent for high yields and lodging resistance among early varieties.

Group V maturity:

**Hill.** Lodges badly. Small seed size not desired by farmers. Plant appearance and yields good.

**Dorman.** Reliable yielder but subject to severe lodging.

Group VI maturity:

**Hood.** Gaining in popularity as a reliable producer of high yields and high quality soybeans.

**Ogden.** A very reliable producer of high yields and high quality soybeans. Some interest by foreign buyers in Ogden as an edible variety.

**Lee.** Small seed size and late maturity detrimental to its wide acceptance.

### Nebraska

**Blackhawk.** The earliest variety recommended for Nebraska. Primarily for later plantings in the northeast cropping district. About 6 days earlier than Hawkeye. Medium height and good lodging resistance.

**Harosoy.** Adapted primarily to the northeast and central and southwest districts under irrigation. Compares favorably with Hawkeye except 3 days earlier. Does not stand as well as Hawkeye under irrigation.

**Hawkeye.** Most widely grown variety in Nebraska. Recommended in all soybean producing districts except southeast. When planted May 20-30 matures in about 120 days. Stands well and gives high yields.

**Adams.** Recommended in same areas as Hawkeye. 3 days later, 1 to 2 inches taller and yields about the same. Has good oil content.

**Ford.** Recommended for all districts. About the same maturity as Lincoln, stands well and about the same height. Its greatest advantage is in the northeast, east central and central cropping districts. Will replace Lincoln, Adams, and Hawkeye in southeast district. Does not yield as well as Clark but is suggested for late planting.

**Clark.** Recommended only in the southeast district where it outyields all other varieties. Stands well and about same height as Ford but matures about 8 days later. Requires about 130 days to mature.

### New Jersey

**Hawkeye.** High yielding, has very stiff straw and stands better than any other adapted variety. Susceptible to pod and stem blight. Occupies about 3% of state's acreage.

**Lincoln.** High yielding, high oil, nonshattering and fair standability. Susceptible to pod and stem blight. Occupies about 7% of acreage.

**Clark.** Full season variety occupying about 90% of acreage in New Jersey. Yield and standability better than Lincoln. Susceptible to pod and stem blight.



### North Carolina

**Lee.** Best adapted variety except for double cropping systems where it does not provide sufficient plant growth. Highest yielding variety in the state.

**Hood and Hill.** Yield slightly less than Lee. Best adapted to northeast part of state. The two varieties offer a wider range in combining dates. Hill matures about Sept. 20. Seed stocks should be ample for 1961 plantings. Growers are cautioned to restrict Hill to land not heavily infested with large broad-leaved weeds which are difficult to combine until frost.

**Jackson.** Best adapted to Piedmont and lower Coastal Plain. A good choice for late planting or double cropping after small grain, since more growth is usually obtained than with earlier maturing varieties.

### Ohio

Ohio has three new recommended varieties, all resistant to phytophthora root rot. They will outyield older adapted varieties only where root rot is a problem.

**Henry and Madison** can be successfully grown in any soybean areas in Ohio.

**Ross** should be restricted to central and southern Ohio.

### Oklahoma

**Clark.** An early variety for northeastern Oklahoma. Yields higher than Perry and Scott in tests.

**Hill.** A medium early variety better suited to northeastern Oklahoma as a full season variety than Dorman. Also adapted to east central Oklahoma, and has given excellent performance for the irrigated areas in northwest and southwest Oklahoma.

**Dorman.** A medium early variety for fine textured soils in east central Oklahoma.

**Hood.** A medium late variety for

east central and southeast Oklahoma. Matures a week earlier than Lee. Also has done well in irrigated southwest Oklahoma. Does not possess excellent seed holding qualities of Lee but generally adequate when harvested 10 to 14 days after maturity.

**Lee.** A late variety well adapted to southeast and irrigated areas of southwest Oklahoma.

### Texas

Soybeans can be grown in all irrigated sections of Texas but most commercial acreage is on the High Plains in northwest. Profitable yields have been produced in some seasons under dryland conditions on bottomland soils of the Red River Valley and in the Coast Prairie. But usually yields in east Texas are too low or inconsistent for profitable production without irrigation.

**Hill.** A new early variety maturing about Oct. 1 in the Texas Panhandle. Expected to replace much acreage planted to Lee. Yields equal to or slightly greater than Lee in the North Plains and about 15% lower in the South Plains. Early maturity its most important advantage.

**Lee.** Most widely grown variety in Texas. Averages about 3 weeks later than Hill and may be damaged by frost in the North High Plains. Recommended for the South High Plains, Red River Valley and south as far as the northern part of the Coast Prairie. Superior shatter and disease resistance make Lee well suited to Texas growing conditions.

**Jackson.** 1 to 2 weeks later maturity than Lee. Recommended for central and south Texas and along the Coast Prairie.

### Virginia

Under ideal conditions there has been no consistent yield leader among recommended varieties.

Weaknesses should be considered in selecting a variety.

**Clark.** The beans deteriorate rapidly when left in the field after maturity or when subject to warm humid weather when near maturity. Susceptible to root rot.

**Perry.** Stems slow to mature causing difficulty in harvest. Beans often shatter when mature.

Clark and Perry are recommended only for the Northern Piedmont and areas west of the Blue Ridge.

**Hill.** Susceptible to stem rot. Will lodge when overplanted. Because seed is small the recommended planting rate is 30 to 35 pounds per acre.

**Dorman.** Shatters at maturity and usually lodges even when grown under excellent conditions.

**Hood.** Lodges more than Ogden and is slow to cover the row thus giving weeds an opportunity to compete.

**Ogden.** The green color is sometimes objectionable to buyers. Shatters, has very little disease resistance. Will deteriorate rapidly when mature and subjected to wet weather.

Hill, Dorman, Hood, and Ogden are recommended for planting in the Southern Piedmont and throughout the Coastal Plain.

**Lee.** Like Hill, the plants tend to lodge when overplanted. In wet years the beans mottle.

**Jackson.** Recommended only for extreme southeastern counties. Very susceptible to purple stain. Lacks disease resistance of Lee.

### Wisconsin

**Norchief.** Adapted to the 85-90 day corn maturity belts. About 3 days later than Flambeau. High yielder. Pods low. Oil content about 20%.

**Chippewa.** Early. Adapted to the 95-110 day corn maturity belts. High yielder. Satisfactory height and excellent lodging resistance. Pods higher off the ground than other early varieties. Oil content about 20%.

**Blackhawk.** Medium late. Adapted to the 105-115 day corn maturity belts. High yielding. Medium tall, stands up well and bears pods well off ground. Oil content about 20½%.

**Harosoy.** Late, about 3 days earlier than Hawkeye. Adapted to 110-115 day corn maturity belts. High yielding. Tall, lodges slightly more than Hawkeye. Oil content about 20½%.

**Lindarin.** Late, maturity same as Harosoy. High yielding, medium height and resistant to lodging. Oil content about 21%.

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## 17



# Leading Soybean Varieties

Characteristics and performance of most widely grown varieties.  
List prepared by agronomists in soybean-producing states.

## SOUTHERN VARIETIES

(listed in order of maturity)

**Hill** is an early variety averaging 5 days later than Scott, 2 days earlier than Dorman, and 14-18 days earlier than Hood. Hill has medium plant height and heavy foliage. In general appearance Hill resembles Lee, but is 21-28 days earlier. It is similar to Lee in shatter resistance and in resistance to the major foliar diseases. In addition to this, Hill has also demonstrated a high degree of resistance to the common root knot nematode. Hill is superior to Dorman in seed production, lodging resistance, and in resistance to the major leaf diseases. It has white flowers, tawny pubescence, a light pod wall, and the seed is yellow with a light brown hilum.

**Dorman** averages 2 days later in maturity than Hill. It is expected that Dorman will be replaced by Hill when seed stocks are adequate. Dorman has white flowers, gray pubescence, a light pod wall, and the seed is yellow with a buff hilum.

**Dortchsoy 67** averages 5 days later in maturity than Dorman and has a similar growth type. It does not hold its seed as well as Dorman. Dortchsoy 67 has white flowers, gray pubescence, a dark gray pod, and yellow seed with buff hilum.

**Hood** is a yellow seeded variety similar in growth characteristics to Ogden. It averages 14-18 days later than Hill, 2 days earlier than Ogden, and 9 days earlier than Lee. It is superior to Ogden in seed holding, but does not hold its seed as well as Lee. Hood is resistant to the diseases bacterial pustule, wildfire, frogeye, and target spot. It has purple flowers, gray pubescence, and the seed is yellow with a buff hilum.

**Ogden** was at one time the most widely grown variety in the South but has been replaced by newer varieties, superior in seed holding and in disease resistance. Seed of Ogden has green coats which are not desired in some foreign markets. Ogden has purple flowers, gray pubescence, and the seed has a brownish-black hilum.

**Lee** averages 9 days later in maturity than Hood. Plants are of medium height with heavy foliage. Lee is resistant to the diseases bac-

terial pustule, wildfire, frogeye, and purple seed stain. It has moderate resistance to the disease target spot. It is highly resistant to shattering. Lee has purple flowers, tawny pubescence, a light tan pod wall. Seed is yellow with black hilum.

**Jackson** is a medium tall variety which averages 10 days later than Lee and 12 to 15 inches taller. It stands very well considering its height. Jackson is resistant to the diseases of frogeye and target spot and has moderate resistance to some strains of root knot nematodes. Under most conditions, Jackson will hold its seed satisfactorily, but when it matures under drought stress it has shown some tendency to shatter. Jackson has white flowers, gray pubescence, a dark gray pod wall, and yellow seed with a buff hilum.

**Rebel** has a growth type similar to that of Jackson. It averages 2 days later in maturity than Jackson. Only limited experimental data is available on this variety.

**Bienville** averages 2-4 days later than Jackson and grows slightly

taller. Under conditions favorable for heavy growth, it does not stand as well as Jackson. Bienville is moderately resistant to target spot. It has purple flowers, tawny pubescence, and yellow seed with a dark brown hilum.

**J.E.W. 45** matures 4-6 days later than Bienville. It has purple flowers, tawny pubescence, and yellow seed with a brown hilum.

**Yelnanda** matures 3-5 days later than J.E.W. 45. It is a rank growing variety developed for late planting on the lighter soils of the Southeast. It has white flowers, dense gray pubescence, and yellow seed with a buff hilum.

**Improved Pelican** is a late maturing, rank growing variety developed primarily to produce a heavy tonnage of green material for turning under in sugarcane fields. Because of its rank growth, Improved Pelican is difficult to combine, especially if planted too early. When planted in late June or early July, Improved Pelican can be combined with greater ease and will produce good yields of high quality seed.

## NORTHERN VARIETIES

(listed in order of maturity)

**Acme** is approximately 10 days earlier than Flambeau. It has gray pubescence (short hairs on stem, leaves and pods), purple flowers and yellow seed and hilum (seed scar). Normally two to three seeds per pod. Grows erect, strong straw.

**Crest**, developed by the Central Experimental Farm, Ottawa, Ontario, Canada, from a cross between ND8-291 (Manitoba Brown x Mandarin) x Mandarin; released in 1958; matures 4 to 7 days earlier than Flambeau. Gray pubescence, purple flowers, yellow seeds and a yellow hilum.

**Flambeau**, developed by the Wisconsin Agricultural Experiment Station from a Russian introduction; released in 1944; the earliest maturing recommended variety grown in the United States. Brown pubescence, purple flowers, yellow seeds with a black hilum.

**Goldsoy**, developed by the Ontario Agricultural College as a selection from O.A.C. No. 211; released about 1940; matures 2 days later than Flambeau; characterized by poor resistance to lodging. Gray pubes-

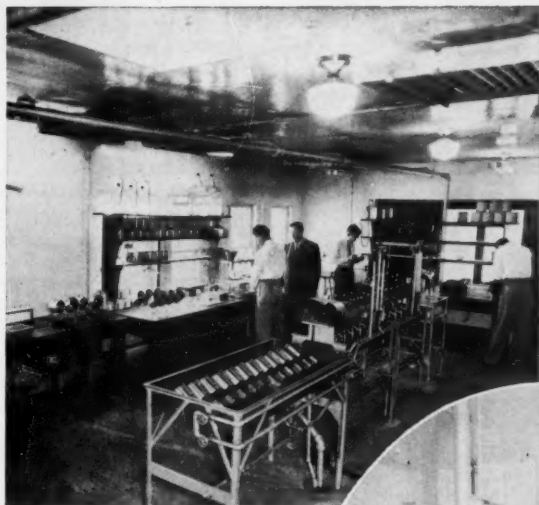
cence, purple flowers, yellow seeds with a yellow hilum.

**Norchief**, developed by the Wisconsin Agricultural Experiment Station in cooperation with the U. S. Regional Soybean Laboratory from the cross Flambeau x Hawkeye; released in 1954; matures 1 day later than Goldsoy; an erect, high yielding, high-oil-content variety for the far northern United States. Brown pubescence, purple flowers, yellow seeds with a black hilum.

**Merit**, developed by the forage crops division, Central Experimental Farm, Ottawa, Canada, as a selection from the cross Blackhawk x Capital; released in 1959; matures 2 days later than Norchief and is higher yielding; white flowers and gray pubescence; seedcoats, hila and cotyledons yellow.

**Comet**, developed by the Division of Forage Plants, Central Experimental Farm, Ottawa, Ontario, Canada, from the cross Pagoda x Mandarin; released in 1954; matures 2 days later than Norchief. Gray pu-

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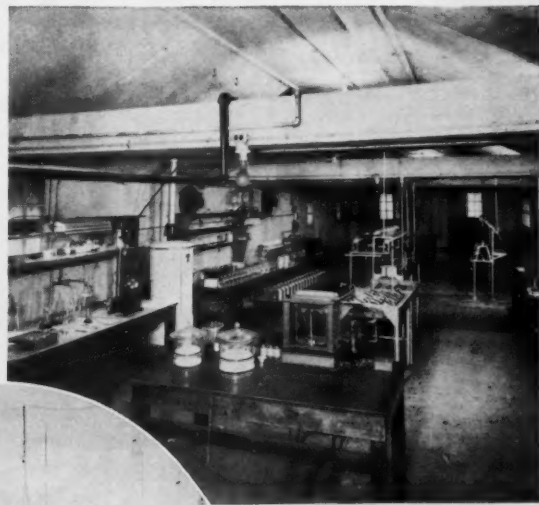
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bescence, purple flowers, yellow seeds with a yellow hilum.

**Grant**, developed by the Wisconsin Agricultural Experiment Station in cooperation with the U. S. Regional Soybean Laboratory, from the cross Lincoln x Seneca; released in 1955; matures 2 days later than Comet; a high yielding, high-oil-content variety with medium lodging resistance. Light brown pubescence, white flowers, yellow seeds with a black hilum.

**Mandarin (Ottawa)**, developed by the Central Experimental Farm, Ottawa, Ontario, Canada, as a selection from Mandarin; released about 1930; matures at the same time as Grant. Gray pubescence, purple flowers, yellow seeds with a yellow hilum.

**Hardome**, developed by the Dominion Experimental Farm, Harrow, Ontario, Canada, from the backcross Mandarin x (Mandarin x A.K.); released in 1953; matures at the same time as Grant and Mandarin (Ottawa). Gray pubescence, purple flowers, yellow seeds with a gray hilum.

**Capital**, developed by the Central Experimental Farm, Ottawa, Ontario, Canada, from the cross of strain No. 171 x A.K. (Harrow); released in 1944; matures 1 day later than Grant; has tendency to lodge. Brown pubescence, purple flowers, yellow seeds with a light brown hilum.

**Chippewa**, developed by the Illinois Agricultural Experiment Station in cooperation with the U. S. Regional Soybean Laboratory from the backcross Lincoln x (Lincoln x Richland); released in 1954; matures 2 days later than Capital; has high yield and high oil content with good resistance to lodging and good seed quality. Brown pubescence, purple flowers, yellow seeds with a black hilum.

**Renville**, developed by the Minnesota Agricultural Experiment Station in cooperation with the U. S. Regional Soybean Laboratory from the backcross Lincoln x (Lincoln x Richland); released in 1952; matures at the same time as Chippewa. Gray pubescence, white flowers, yellow seeds with a light brown hilum.

**Harly**, developed by the Dominion Experimental Farm, Harrow, Ontario, Canada, from the cross Mandarin x A. K. (Harrow); released in 1948; matures 1 day later than Renville; a tall variety with good lodging resistance and good seed quality, but with low oil content. Gray pubescence, purple flowers, yellow seeds with a yellow hilum.

**Monroe**, developed by the Ohio Agricultural Experiment Station in cooperation with the U. S. Regional Soybean Laboratory from the cross Mukden x Mandarin; released in

1949; matures 2 days later than Harly. Gray pubescence, white flowers, yellow seeds with a yellow hilum.

**Blackhawk**, developed by the Iowa Agricultural Experiment Station in cooperation with the U. S. Regional Soybean Laboratory from the cross Mukden x Richland; released in 1951; matures 2 days later than Monroe. Gray pubescence, white flowers, yellow seeds with a light brown hilum.

**Lindarin**, developed by the Purdue Agricultural Experiment Station in cooperation with the U. S. Regional Soybean Laboratory, as a selection from the cross Mandarin (Ottawa) x Lincoln; released in 1958; matures about the same time as Earlyana. Gray pubescence, purple flowers, yellow seeds with a buff hilum.

**Harosoy**, developed by the Dominion Experimental Station, Harrow, Ontario, Canada, from the backcross Mandarin x (Mandarin x A.K.); released in 1951; matures 1 day later than Earlyana; characterized by consistently high yield in its area of adaptation. Gray pubescence, purple flowers, yellow seeds with a yellow hilum.

**Hawkeye**, developed by the Iowa Agricultural Experiment Station in cooperation with the U. S. Regional Soybean Laboratory from the cross Mukden x Richland; released in 1948; matures 3 days later than Harosoy; characterized by good yield, exceptionally high lodging resistance, good seed quality, and high oil content. Gray pubescence, purple flowers, yellow seeds with a black hilum with brown outer ring.

**Harman**, developed by the Dominion Experimental Farm, Harrow, Ontario, Canada, as a selection from the variety Manchur; released in 1944; matures about the same time as Hawkeye. Brown pubescence, purple flowers, yellow seeds with a black hilum.

**Adams**, developed by the Iowa Agricultural Experiment Station in cooperation with the U. S. Regional Soybean Laboratory from the cross Illini x Dunfield; released in 1949; matures 3 days later than Hawkeye; very high oil content and good yield. Gray pubescence, white flowers, yellow seeds with a light brown hilum.

**Ford**, developed by the Iowa Agricultural Experiment Station in cooperation with the U. S. Regional Soybean Laboratory, from the backcross Lincoln x (Lincoln x Richland); released in 1959; matures 2 days later than Adams. Brown pubescence, white flowers, yellow seeds with a black hilum.

**Shelby**, developed by the Illinois Agricultural Experiment Station in cooperation with the U. S. Regional

Soybean Laboratory, from the backcross Lincoln x (Lincoln x Richland); released in 1958; matures a day later than Ford. Brown pubescence, purple flowers, yellow seeds with black hilum.

**Clark**, developed by the Illinois Agricultural Experiment Station in cooperation with the U. S. Regional Soybean Laboratory from the backcross Lincoln x (Lincoln x Richland); released in 1953; matures 5 days later than Lincoln; characterized by exceptionally high yield in its area of adaptation, with good resistance to lodging and good oil content. Brown pubescence, purple flowers, yellow seeds with black hilum.

**Wabash**, developed by the Purdue Agricultural Experiment Station in cooperation with the U. S. Regional Soybean Laboratory from the cross Dunfield x Mansoy; released in 1949; matures a day later than Clark. Gray pubescence, white flowers, yellow seeds with a light brown hilum.

**Perry**, developed by the Purdue Agricultural Experiment Station in cooperation with the U. S. Regional Soybean Laboratory from the cross Patoka x L37-1355; released in 1952; matures 5 days later than Wabash. Gray pubescence, purple flowers, yellow seeds with a black hilum with brown outer ring.

**Scott**, developed by the Missouri Agricultural Experiment Station in cooperation with the U. S. Regional Soybean Laboratory from a cross between a pustule resistant line from S-100 x C.N.S. and a line from Lincoln x Richland; released in 1958; matures about 4 days later than Perry. Gray pubescence, purple flowers, yellow seeds with a black hilum with a brown outer ring.





KENT (left) and Clark (right) are similar in height and growth type. Kent is higher in yield but 9 days later in maturity than Clark.



KENT is high in yield, erect in growth, and pods well up from the ground, which helps to eliminate combining loss.

## Two New Soybean Varieties —

# Kent, a High Yielder

By A. H. PROBST and  
KIRK ATHOW<sup>1</sup>

KENT, A NEW yellow-seeded soybean variety developed and tested by research workers of the U. S. Department of Agriculture and cooperating state agricultural experiment stations, has been released for seed increase in 1961. States participating in the release of this new variety include Delaware, Maryland, Indiana, Illinois, and Kansas. Kent is best adapted in the dotted area of these states shown on the map.

<sup>1</sup> Research agronomist, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture, and associate professor of agronomy, Purdue University; and agent, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture, and associate professor of plant pathology, Purdue University.

Kent is high-yielding, high in oil content, and resistant to lodging. It is similar to Clark in growth type and height but is about 9 days later in maturity. Kent is resistant to some races of downy mildew and to frogeye leafspot, including a recently identified race to which Clark is susceptible. Kent has medium- to large-sized yellow seeds with black hilum (seed scar). The plants produce a dense spreading, dark green foliage and are of medium height, with purple flowers and brown pubescence.

This new variety has been tested extensively in several East Coast States and in Indiana, Illinois, Missouri, and Kansas. In 76 regional trials from 1952 through 1959, Kent has averaged 37.8 bushels per acre

compared with 35.1 for Clark. Yield data by areas and other data for all tests are shown in table 1. Yields have been especially high in comparison with those for Clark in the Delaware-Maryland and Indiana-Illinois adaptation areas.

Kent is a pureline selection from a cross of Lincoln and Ogden made in 1950 by A. H. Probst and Kirk Athow at the Purdue Agricultural Experiment Station. The cross was made at the University of Illinois by L. F. Williams of the U. S. Regional Soybean Laboratory.

Seed from the 1960 crop of Kent is being allotted to qualified growers of certified soybean seed, who will grow it according to certification rules in 1961 and make it available to other growers. Adequate seed should be available in 1962 to meet the need of soybean growers who want it in its area of adaptation.

## Bethel<sup>1</sup>

By H. WILLIAM CRITTENDEN,  
FRANK B. SPRINGER, JR. and  
RICHARD H. COLE<sup>2</sup>

BETHEL IS THE result of an individual plant selection made by Dr. H. W. Crittenden, department of plant pathology, University of Delaware, and tested in cooperation with the department of agronomy and the U. S. Department of Agriculture. The original cross, Perry X FC33243 (Anderson), was made by Dr. M. G. Weiss at the Plant Industry Station, Beltsville, Md. The parents were chosen for the high yield of Perry and the root-knot nematode resistance of FC33243.

<sup>1</sup> Published as Miscellaneous Paper No. 377 with the approval of the director of the Delaware Agricultural Experiment Station. Contribution No. 128 of the Department of plant pathology. <sup>2</sup> Assistant professor of plant pathology, assistant agronomist, assistant professor of agronomy, respectively, University of Delaware.

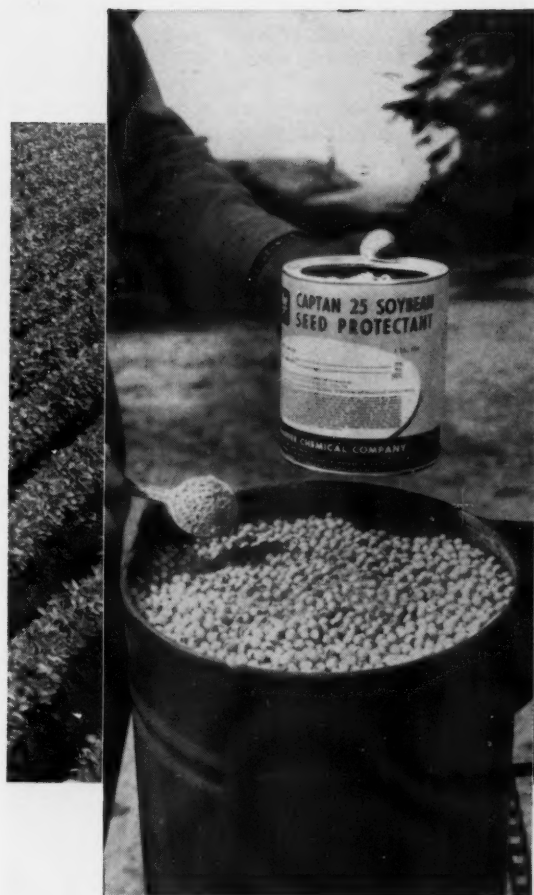
TABLE 1. COMPARISON OF KENT, CLARK, AND WABASH FOR THE PERIOD 1952-1959  
—Area and years tested—

Variety and number of tests	Md., Del., 1954-1959	Ind., Ill., 1952-1959	Mo., 1954-1959	Kans., 1954-1959	Matur. index <sup>a</sup>	Lodging <sup>b</sup>	—All tests, 1952-1959—				
							Ht.	Seeds qual. <sup>c</sup>	Seeds /lb.	Protein	Oil
No. of tests	13	30	14	16	64	61	70	71	76	76	76
	bu.	bu.	bu.	bu.	days	score	in.	score	no.	%	%
Kent	45.1	43.2	27.8	22.9	9	1.7	41	2.1	2700	40.9	21.9
Clark	38.3	39.8	26.6	22.7	0	1.9	40	2.2	2900	40.9	21.7
Wabash	34.1	35.1	24.5	20.1	1	2.2	43	2.0	3150	40.5	21.6

<sup>a</sup> Days later than Clark. <sup>b</sup> Rated on a score of 1 to 5 (1 is erect; 5 is lodged flat). <sup>c</sup> Rated on a score of 1 to 5 (1 is excellent; 5 is very poor).



KENT is best adapted in the dotted areas.



## START OF AN IDEAL STAND!



Soybean growers are quickly learning the advantages of treating their own seed right in the field.

It's easy and inexpensive with Stauffer CAPTAN 25 Soybean Seed Protectant because you apply it to seed in the planter box. CAPTAN 25 controls seed and soil-borne diseases, including damping-off, seed decay organisms and seedling blights.

The planter box method of application gives good coverage and eliminates additional handling. Any excess flows with the seed into the furrow, giving extra protection against soil-borne diseases. The recommended dosage is 4 ounces per bushel or 7 ounces per 100 pounds of seed. You can apply CAPTAN 25 to previously treated seed.

Help your seed. Use CAPTAN 25 Soybean Seed Protectant. See your dealer. Stauffer Chemical Company, 380 Madison Avenue, New York 17, N. Y. Sales and service offices throughout the country.



TABLE 1. COMPARISON OF BETHEL, CLARK AND WABASH (1958-1959)

Location Character	Delaware		North Central States							
	Yield bu./A	Matu- rity days	Yield bu./A	Matu- rity days	Lodg- ing Score <sup>1</sup>	Height Inches	Seed Qual- ity Score <sup>2</sup>	Seed Weight g/100 beans	Pro- tein %	Oil %
No. of tests	5	5	21	19	18	18	20	19	18	18
Variety										
Bethel	43.8	135	37.2	133	2.1	46	2.4	15.6	41.6	21.0
Clark	45.4	129	37.3	123	1.8	41	2.2	16.2	40.7	22.1
Wabash	37.9	129	33.4	124	2.0	44	1.9	14.8	40.4	22.0

<sup>1</sup> Lodging scores are based on a scale of 1 to 5, 1=least lodging and 5=most lodging. <sup>2</sup> Seed quality is rated from 1 to 5, 1=very good and 5=very poor.

Since 1955, Dr. Crittenden made several thousand individual plant selections developing Bethel (UD 321), a soybean true to type for the following characteristics: resistance to one species of root-knot nematode (*Meloidogyne incognita acrita*, Chitwood 1949), high protein content, and a yellow hilum (seed scar). The protein content of Bethel is the highest of any of the commercial varieties in the same maturity group. The yellow hilum is a characteristic given high preference by the export trade. Bethel has resistance to the "pod and stem blight disease" (*Diaporthe phaseolorum* var. *sojae* (Lehm.) Wehm.) and the disease known as "frog-eye" (*Cercospora sojae* Hara).

The new Bethel soybean is adapted to those areas in Delaware, Maryland and Virginia where the root-knot nematode (*Meloidogyne incognita acrita*) is a problem of horticultural crops. Control of the root-knot nematode can be obtained in those areas with 2 years of Bethel soybean production. Following this treatment, the areas can be returned to horticultural crop production. This rotation permits production of a cash

crop while controlling the nematode.

Bethel is an erect, branching variety of medium height, with white flowers and gray pubescence. It matures 6 to 10 days later than Wabash and Clark and is 4 to 8 days earlier than Dorman and Hill. It averages 46 inches in height and stands nearly as well as Clark and Wabash.

Bethel has medium-sized yellow seeds of very good quality. In 2 years' tests (1958-1959), as summarized in table 1, the average yield in bushels per acre in Delaware of Bethel, Clark, and Wabash was as follows: Bethel, 43.8; Clark, 45.4; Wabash, 37.9. In the North Central region, yields were: Bethel, 37.2; Clark, 37.3; Wabash, 33.4. Bethel is high in oil and protein content, averaging 21.0% and 41.6% respectively on a dry basis.

The agricultural experiment stations of 10 states cooperated in testing Bethel. Initial seed stocks are now being produced and seed should be available to farmers in 1961 in limited amounts.

## SOYBEAN COUNCIL OF AMERICA, INC.



**SPEAKERS** at the poultry feeding seminar at Burgos, Spain. L. to R., Dr. Galan, technical director of the mixed feed plant of Mariano Perez S. A.; Dr. Salvador Arias, secretary of the poultry co-op; Dr. Gregorio Varela, professor of animal physiology of the University of Granada; Gonzalo Rivera, assistant to the Spanish director of the Soybean Council; and Fernando Delgado, president of the poultry co-op.

## More Seminars Are Held in Spain

THE SECOND ANNUAL soybean products seminar will be held at Seville, Spain, Mar. 21-23, one of a series of seminars under the sponsorship of the Council in Spain. Both Spanish and American scientists will discuss soybeans and soybean products and how they can meet the nutritional requirements of the American people.

The roles of both soybean oil and soy flour in the human diet will be considered.

Dr. Jake L. Krider, vice president of Central Soya, Fort Wayne, Ind., will discuss the significance of soy-

bean products in human nutrition in the United States. Dr. Krider is in Europe on a 6-months leave of absence from Central Soya.

A research project on soybean oil, which is sponsored by the Council, is under way at the Institute at Seville where the seminar was held.

A poultry feeding seminar was held Dec. 12-18 at Burgos, in the section of Spain where the poultry industry is concentrated. The seminar was sponsored cooperatively by the Council and the Cooperativa Provincial Avicola, the poultry cooperative of the province.



**BETHEL** variety, showing habit of growth and pod set at maturity.

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**1** Precision Seed-Grain Cleaning. Whether you work with corn—wheat—soybeans or pea beans—you will find the fast triple-fan action and bottom blast control of the Clipper Super G to be your final guarantee for precision seed-grain cleaning. Capacity 600—700 B.P.H.

**2** Fast Market Grain Cleaning. Equally versatile as a fast market grain cleaner, the Clipper Super G handles up to 3500 B.P.H. of corn—wheat—or soybeans—with its variable screen shake increasing effectiveness as required.

There are more than 100 seed and grain cleaners in the world-famous Clipper line—any **one** will do a job for you. Write for complete details and specifications.



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## SOYBEAN COUNCIL OF AMERICA, INC.

### Pres. Roach on 5-Month Round-the-World Tour

HOWARD L. ROACH, Soybean Council president, left Feb. 3 on a round-the-world trip that will take him to three continents and last almost 5 months.

Mr. Roach will survey and implement soybean market development activities for the Soybean Council in Asia, North Africa, and Europe, while abroad. His first stop was in Tokyo, Japan, Feb. 8. He will be accompanied over part of the route by Fred R. Marti, director of the Council's overseas operations, Rome; and J. L. Krider of Central Soya, Fort Wayne, Ind., now employed by SBCA.

Mr. Roach will survey work being done in India and will work toward activation of a market development project in Pakistan, and survey the possibilities of such projects in Turkey and Iran. He plans to open Council offices in Belgrade, Yugoslavia; in London, and Copenhagen, before he returns to the United States June 24.

He plans to attend the World Fair at Cairo, Egypt, being held Mar. 21-Apr. 21; and the Paris Food Fair, being held May 18-29.

Mr. Roach will address the International Association of Oilseed Crushers at Stockholm, Sweden, June 5.

### Minnesota manager reports on SHANZER grain drier

"I believe in staying with a good thing — that's why our second drier was another Shanzer! Season after season, the trouble-free, full-rated performance of these units, even on extremely wet grain, has certainly earned our respect."



— Says, W. H. Lenton, Manager Farmers Elevator Company, Inc., Stewartville, Minnesota.

Get more for your drier dollar, see your Shanzer representative, or write:

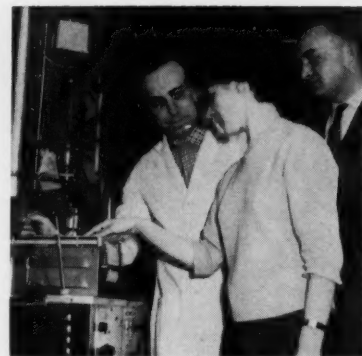
**SHANZER MANUFACTURING COMPANY**  
SUtter 1-5200  
85 Bluxome Street, San Francisco, California

Other points Mr. Roach plans to include in his tour, some of them in company with Drs. Marti and Krider: Hongkong; Rangoon, Calcutta, New Delhi, and Bombay, India; Karachi, Pakistan; Teheran, Iran; Beirut, Lebanon; Athens; Tel-Aviv, Israel; Madrid; Rotterdam; Hamburg; and Rome.

### Belgian Chemist at Peoria Laboratory

A CHEMIST with Belgium's largest soybean oil processing company visited the Northern Utilization Research and Development Division, Peoria, Ill., in January to study and discuss research in oil processing. Research that would improve his company's edible oils was of primary interest.

Rene De Lathauwer, representing Belgium's oilseed crushers, and Mrs. De Lathauwer, who assists her husband in the laboratories of Oliefabrieken Vandemoortele, Herent, Belgium, discussed the Department of Agriculture's oil and protein utilization research with J. C. Cowan, oilseeds laboratory chief at the North-



JOSEPH J. RACKIS (left) of the U. S. Department of Agriculture's Northern utilization laboratory, Peoria, Ill., discusses soybean protein research with Belgian visitors, Chemist Rene De Lathauwer and Mrs. De Lathauwer.

ern Division. They also collected information from members of Dr. Cowan's staff and the staff of the engineering laboratory.

Their trip to the Northern Division, the Southern Division at New Orleans, and oilseed processors in the United States was sponsored by the Soybean Council of America.

## JAPANESE-AMERICAN SOYBEAN INSTITUTE

### Government Slow to Free Imports

By SHIZUKA HAYASHI

Managing Director, Japanese American Soybean Institute, Nikkatsu International Bldg., No. 1-Chome Yurakucho Chiyoda-Ku, Tokyo, Japan

WHY HAS the importation of soybeans been controlled in Japan in the past? The government has announced and the people have believed it was to protect domestic soybeans from the competition of imported soybeans.

This argument has been repeated for years. But time has passed and Japan is now in the midst of a worldwide current of trade liberalization.

Since early in 1960 we have been led to believe that the Japanese government had decided to place soybeans on the free list and that automatic allocation was to go into effect on soybeans last October.

The GATT conference has been in session at Geneva since last November, and liberalization of soybeans is on the agenda. But up to now we have not heard of a favorable decision on it. The question should have been settled long ago. Why hasn't it been? The answer may be given in a few words. The Japanese Ministry of Agriculture

and Forestry evidently does not wish to free soybeans. It wants to keep them under controls.

Various measures have been drafted and suggested as necessary for automatic allocation, but without a single factor in favor of soybean imports.

The interest of the people should be given preference. This is true of all countries. The following facts clearly indicate that the importation of soybeans has arrived at the stage where it no longer needs to be controlled.

The demand for soybeans has been increasing steadily and in 1960 Japanese imports were at a record of 1,125,888 metric tons (41 million bushels) of soybeans, compared with 951,123 metric tons in 1959. According to the economic planning board Japan will need 2,034,000 metric tons in 1965 and 2,673,000 tons (98 million bushels) in 1970, based on a rise in incomes of 7.8%. On the other hand, domestic production of soybeans is estimated at 412,000 metric tons for the 1965-through-1970 period. This is no increase in production in Japan as compared with the 1956-58 average production, which was 412,000 tons.



## GRITS and FLAKES . . . from the World of Soy

### Kruse Passes; He Was Pioneer in Extraction

Funeral services were held in Decatur, Ind., Jan. 5, for Norman F. Kruse, 53, vice president and technical director for Central Soya, who died of a heart attack on Jan. 3 at his home in Decatur.

Kruse, who joined Central Soya in 1936, had administrative responsibility for the company's research and development programs, including the development of new products from soybeans. Over the years he had received numerous patents for the development of new products and processes.



N. F. Kruse

He was a pioneer in the introduction of the solvent extraction process for soybeans in the United States, and his work in this field contributed significantly to the growth of the soybean processing industry.

He participated in the purchase from Germany of a Hansa-Muhle type solvent extractor and arranged the engineering of its installation and operation at Decatur in 1937. This was the first Hansa-Muhle extractor and one of the first solvent plants to be installed in the United States.

Kruse developed the toasting process for soybean oil meal, culminating in the invention and introduction of the desolventizer-toaster in 1949-51. These developments contributed significantly to the widespread acceptance of soybean oil meal as the prime protein concentrate for mixed feeds.

His innovations in other phases of soybean solvent extraction led the way to today's large scale economical processing plants which are the mark of the industry.

Kruse's technical work in the field of lecithin processing led to the development of continuous processes for the economical production of quality products.

He was the first chairman of the technical committee of the National Soybean Processors Association and was an active member of the American Oil Chemists' Society.

A native of Iowa, Kruse was a graduate of Iowa State University.

FEBRUARY, 1961

### Prater Awards Pleasure Trip



1960 WINNER of Prater president's selling bee, Kenneth Fishbaugh, left, beams in anticipation of Las Vegas all-expense-paid trip; Mrs. Fishbaugh receives the First National money bag of silver dollars, supplied for miscellaneous expenses, from G. F. Thomas, Prater president.

### Davies Named Midsouth District Representative

Guy F. Davies has been appointed American Mineral Spirit Co.'s Midsouth district sales representative.

He will be responsible for sales of Amsco's products in Louisiana, Mississippi, Arkansas, western Tennessee and parts of Missouri, southern Illinois and western Kentucky.

Mr. Davies is a native of Atlanta and has represented Amsco in the Southeast since May 1957.



Guy F. Davies

### H. T. Morrison Elected Cargill Board Chairman

Directors of Cargill, Inc., have elected H. Terry Morrison to board chairman. Formerly vice chairman, he succeeds John H. MacMillan, Jr., who died recently.

The board's action completes a major realignment of executive positions in the 95-year-old farm products firm, a company announcement said.

Morrison, a native of Virginia and a graduate of Virginia Military Institute, joined Cargill in 1946. He was elected a vice president in 1947 and a director in 1952. In 1957, he was elected executive vice president and chief administrative officer, and

he became vice chairman of the board last year.

Other recent top management shifts in Cargill were:

Erwin E. Kelm became president in August, succeeding Cargill MacMillan who is on leave of absence because of illness. Fred M. Seed and H. Robert Dierks were elected vice presidents. And Walter B. Saunders and M. D. McVay were elected vice presidents succeeding Dierks and Seed as heads of Cargill's grain and vegetable oil divisions.

William F. Geddes 64, head of the department of agricultural biochemistry of the University of Minnesota, died Jan. 7 in Mexico City where he had gone for a month's trip. Dr. Geddes, who was known as one of the world's leading cereal and food chemists, worked with the soybean industry at one time in evaluating the keeping qualities of soy flour in storage. He had been a member of the University of Minnesota faculty for 23 years.

The Procter & Gamble Co. has announced the appointment of George H. Perbix to the newly created position of manager of the company's general buying department.

Now is the time  
to order

**HARTZ**

*Quality*

**SOYBEANS**

HOOD - LEE - JACKSON  
OGDEN - DORMAN - MAMLOXI

Double Cleaned and Graded  
to meet top specifications.



**Jacob Hartz Seed Co.  
Inc.**

WA 2-1673 Cable Hartzseed  
STUTTGART, ARKANSAS

## NEW PRODUCTS and SERVICES

**GRAIN HANDLING.** Black, Sivalls & Bryson, Inc., has published a new booklet designed to help farmers get more efficient arrangement and operation of equipment for grain handling, conditioning, processing and storage.

Called the "Harvest Control Systems Guide," the publication is a result of a study by the firm's Agri-Systems committee, a panel of agricultural experts engaged in continuous research on subjects relating to postharvest efficiency. The study was initiated to determine the most efficient arrangements and methods of operation of grain handling systems for on-the-farm storage.

Selection of proper bin size and expandable sites for various types of systems are gone into in detail. In-storage drying, batch drying and combination in-storage and batch drying are explained. Types of equipment for moving grain from one location to another, such as augers and conveyors, are discussed and grain processing equipment is explained and evaluated.

Copies of the booklet may be obtained by writing Soybean Digest 2c, Hudson, Iowa. Enclose 50¢ for handling and mailing. Copies are also available for study at any BS&B dealer.

**GRAIN STORAGE.** A revised edition of the publication, "Aeration of Grain in Commercial Storages," has been issued by the U. S. Department of Agriculture, bringing up to date a bulletin with the same title published in 1957.

In 46 pages of text, tables and illustrations, the pub-

lication reports on research and recommendations for equipment and methods of moving air through stored grain, as opposed to the traditional method of moving the grain itself.

The publication is based on USDA research work in cooperation with agricultural experiment stations in Georgia, Indiana, Iowa, Kansas and Texas.

Copies of Marketing Research Report No. 178 are available without cost from Office of Information, U. S. Department of Agriculture, Washington 25, D. C.

**COMBINE.** What the manufacturer calls the largest self-propelled combines ever produced—machines weighing nearly 7 tons and utilizing 22-foot cutting platforms—are being put into production at the John Deere Harvester Works in East Moline, Ill., this winter.

The new combine, the John Deere 105, will permit one operator to increase his harvesting capacity more than 20% above that possible with the largest combines previously available, according to John Deere.

The cutting platform on the 105 is 4 feet wider than on the largest combines available up to this time. In addition, the cleaning and separating capacity, the power, and the grain tank have been increased roughly 25% over the biggest machines previously available.

For further information write Soybean Digest 2d, Hudson, Iowa.

**INSECTICIDE.** Stauffer Chemical Co. has developed a flowable formulation of the new insecticide, Sevin. It is instantly dispersible in spray machinery—even in the low-agitation type units which are often used in airplanes. Heretofore, Sevin has been available only as a wettable powder.

Sevin, a relatively new insecticide (1-naphthyl methylcarbamate), is chemically different from other insecticides now on the market. It combines high toxicity for insects with long residual life and low toxicity to humans, warm-blooded animals, birds and fish. It has also proved to be effective in the control of a number of insect strains which have developed resistance to other insecticides.

For further information write Soybean Digest 2a, Hudson, Iowa.

**LIQUID STORAGE.** Hess Terminal Corp. has issued a nicely illustrated booklet describing the company's facilities for the storage and distribution of bulk liquids at 15 strategic terminal locations. These terminals are located in the key marketing areas from the Texas-Louisiana Gulf Coast up to the New England area, according to the Hess Co.

The booklet describes the company's fleet of ocean-going tankers and barges, including the largest barge in the world, also the transport trucks, the rail facilities and its drumming and canning operations.

For further information write Soybean Digest 2b, Hudson, Iowa.



Your **BEST** Supplier of

**ALANAP**

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OR  
GRANULES

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**WOODBURY CHEMICAL CO.**

- ★ Not just a product—a program to increase soybean yields.
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- ★ **DEALERS** and **DISTRIBUTORS** write for details of our Soybean program — with prices.

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APPLICATORS**

# ALANAP®

PRE-EMERGENCE WEED CONTROL

## SOYBEANS NEEDN'T HAVE WEEDS

Liquid or granular ALANAP®, the pre-emergence weed killer, gives positive control when recommended dosages are followed.

- You can plant earlier
- Hand weeding is out
- Soybeans may be harvested earlier
- Cleaner fields at harvest time allow faster combine operation
- Clean fields mean higher yields

Upper photo shows soybeans choked with weeds. Lower photo shows healthy soybeans growing freely after treatment with ALANAP, the pre-emergence weed killer.



**United States Rubber**

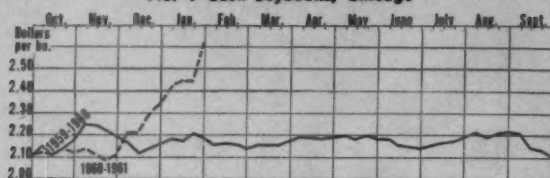
**Naugatuck Chemical Division**

296AL Elm Street, Naugatuck, Connecticut

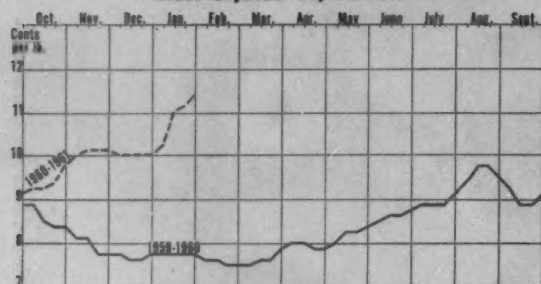
producers of seed protectants, fungicides, miticides, insecticides, growth retardants, herbicides: Spargon, Phygon, Aramite, Synklor, MN, Alanap, Duresol.



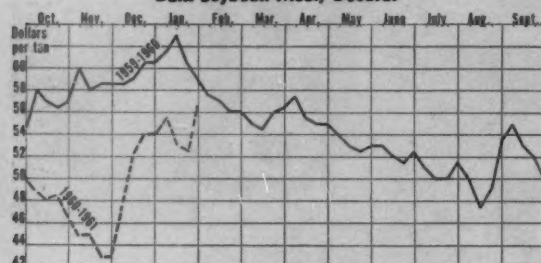
# **TRENDS AT A GLANCE (Weekly Close)** **No. 1 Cash Soybeans, Chicago**



## **Crude Soybean Oil, Tankers**

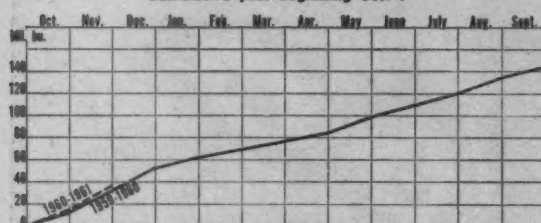


## **Bulk Soybean Meal, Decatur**



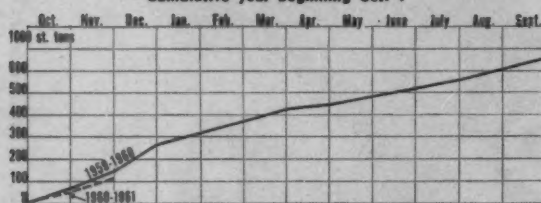
## **Soybean Exports**

Cumulative year beginning Oct. 1

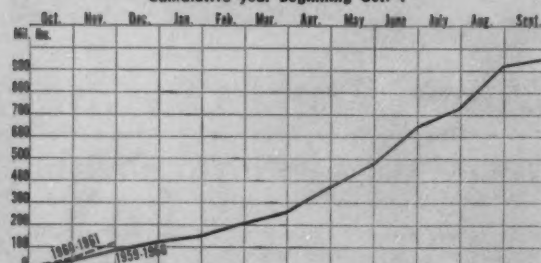


## **Soybean Oil Exports**

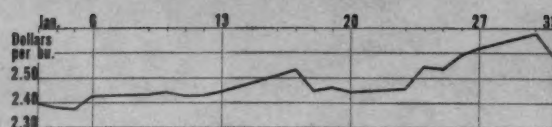
Cumulative year beginning Oct. 1



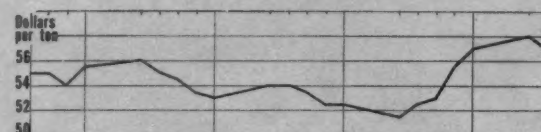
## **Soybean Cake and Meal Exports** Cumulative year beginning Oct. 1



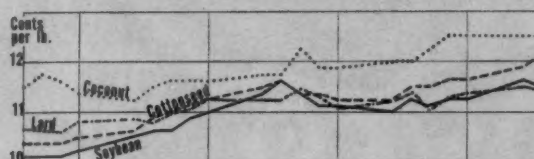
# **DAILY MARKET PRICES** **No. 1 Cash Soybeans, Chicago**



## **Bulk Soybean Meal, Decatur**



## **Crude Vegetable Oils and Lard**



## **CASH PRICES, JANUARY 1961\***

	No. 1 yellow soybeans Chicago	Bulk soybean meal Decatur	Soybean oil Decatur	Cottonseed oil Mississippi Valley	Coconut oil Pacific Coast	Lard Chicago
Jan. 2	Holiday					
3	\$2.39 1/4	\$55.00	10 1/8	10 3/8	11 1/2	1.065
4	2.37 3/4	55.00	10 3/8	10 3/8	11 3/4	1.062
5	2.37 1/2	54.00	10 1/8	10 3/8	11 3/8	1.060
6	2.42 1/2	55.50	10 1/4	10 1/2	11 3/8	1.080
7	Saturday					
9	2.34	56.00	10 1/2	10 3/8	11 1/4	1.085
10	2.44	55.00	10 3/8	10 3/8	11 1/2	1.080
11	2.42 1/2	54.50	10 3/8	11	11 3/8	1.095
12	2.42 3/4	53.50	10 7/8	11 1/8	11 3/8	1.105
13	2.44 1/4	53.00	11	11 1/4	11 3/8	1.125
14	Saturday					
16	2.50 3/4	54.00	11 3/8	11 1/2	11 3/4	1.125
17	2.35	54.00	11 3/8	11 3/8	11 3/4	1.127
18	2.45	53.50	11 3/8	11 3/8	12 1/4	1.142
19	2.46	52.50	11 1/8	11 3/8	11 3/8	1.130
20	2.44 1/4	52.50	11 1/8	11 1/4	11 3/8	1.110
21	Saturday					
23	2.45 1/2	51.50	11	11 1/4	12	1.120
24	2.54	52.50	11 1/4	11 1/2	12	1.140
25	2.53 1/2	53.00	11 1/8	11 1/2	12 1/4	1.105
26	2.59	55.50	11 1/4	11 3/8	12 1/2	1.127
27	2.62	57.00	11 3/8	11 3/8	12 1/2	1.137
28	Saturday					
30	2.67 1/2	58.00	11 3/8	11 3/8	12 1/2	1.147
31	2.58 1/4	57.00	11 1/2	12 1/8	12 1/2	1.142

\* From Wall Street Journal, Chicago.

## **1959 AND 1960 SOYBEAN CROPS**

	1960-61	1959-60
Soybean stocks in all positions Jan. 1	424,493,000 bu.	451,899,000 bu.
Total soybeans placed under price support Dec. 31	21,879,770 bu.	32,851,672 bu.
Total soybeans withdrawn from support as of Dec. 31	224,829 bu.	247,579 bu.
Soybeans crushed first quarter	109,993,000 bu.	105,200,000 bu.
Total soybeans inspected for overseas export plus lake shipments to Canada Oct. 1-Jan. 27	70,389,862 bu.	65,824,792 bu.



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ESSO STANDARD, DIVISION OF

HUMBLE OIL & REFINING COMPANY



## WASHINGTON DIGEST

### May Encourage Shift to Soybeans

SOMETIMES a situation can become so good that it appears it might become worse. Soybean supplies might be considered in this light, except that government's and industry's best market observers are yet unwilling to say when or whether there will be a price break.

In USDA's latest look at prospects, "The Fats and Oils Situation," supplies are scheduled to tighten even more. Bean oil prices are seen as rising still further to average about one-third higher than last year's 8.3¢ per pound. This means an increase of somewhat more than a penny over the average of 10¢ during the past October-December.

This outlook, and USDA is pretty firm about it, is (1) based on a new high in domestic consumption, (2) record exports based in part on government-financed programs, (3) smaller supplies of lard, and (4) the higher level of food fats and oils prices in general.

Prices to farmers will make more than the usual seasonal increase of 15¢ per bushel for the previous 3 years, the result of crusher and exporter demand for the reduced supply of beans. October-December farm prices averaged out at \$1.96 per bushel, about the same as last year.

Average soybean meal prices for the rest of the feeding year should be about last year's \$54 per ton. Through December they've been \$10 below last year, but demand from here on is due to be strong owing to a rise in the feeding rate of protein

feeds per animal and only slight change in total livestock numbers.

Crushings will be kept up near last year's level of about 400 million bushels, with exports estimated at about last year's 142 million bushels. This should result in a carryover this coming October of 10 million bushels, down sharply from last year's 23 million bushels.

#### China Famine Overplayed

Cable reports we have received through on-the-spot observers still hold that the Red China famine has been overplayed, at least insofar as any actual effect it should be having on the soybean supplies situation.

Unfortunately for the Chinese, the expression, "the starving Chinese," is an old one. Another factor raising doubts about the effect on soybean supplies is that the famine reports are via Peiping radio, hardly the world's most reliable news source. Still another factor is that no reliable estimates of a Chinese soybean shortage are available.

Assuming that Red China was blocking bean exports, that was a month ago for the purpose of taking stock of national food supplies. It is understood via our reports (independent of Peiping radio) that export commitments were fulfilled but that there have been no offerings above that. This still doesn't mean, as on-the-spot observers see it, that it won't make sense to the Red Chinese to sell beans in order to buy grain. The nutritional effect wouldn't count.



By **GEORGE PETER**

Granting that the worst you've heard is true, however, that would still be overrating the effect of a halt to Chinese bean exports this season. Best estimates put total exports at 55 million bushels, more than half of which went to Russia. If this figure were cut 10 or 15 million bushels, it should still make very little difference in the world price for oil.

#### 1962 Also Bullish

Food fats and oils, including soybean products, are scheduled to play a bigger role in the new stepped-up Food for Peace program, all the signs here indicate.

UNOFFICIALLY, this factor is also likely to play a big part in the coming decision by the Secretary of Agriculture on whether to increase the price support level for 1961-crop soybeans.

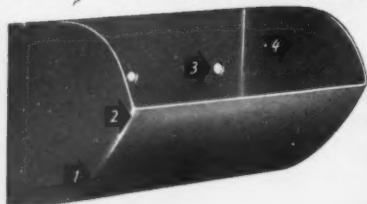
The President's Food for Peace committee has called for increased supplies of soybeans, oils and fats, meats, butter, margarine, nonfat milk, and peas which it reports the United States is not producing enough of "to sustain adequate diets either for our needy in the United States or for the needy abroad."

To accomplish this goal, the committee said "it will be necessary to bring about shifts in production from wheat and corn into the oils and fats and protein foods needed for a nutritional diet." The Secretary of Agriculture already has authority to act to increase the production of fats and oils and some meats and dairy products by increasing price supports. New legislation would be necessary, however, to cut back wheat production. A cut in corn production might be brought about by offering more inducement to produce soybeans and other crops.

#### P. L. 480 to Get Boost

For the next 5 years, the President's committee wants P. L. 480 Title I authorizations of at least \$3 billion a year compared to the pres-

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ent \$1.5 billion, and under Title II, \$500 million a year.

To round out the P. L. 480 program for the remainder of 1961, the committee wants an additional \$2 billion. Outgoing Secretary of Agriculture Benson called for \$1.3 billion to carry P. L. 480 through this year and an increase of \$1.5 billion a year for a 2-year extension, although the Budget Bureau vetoed the latter item.

Basis of the committee's idea is that nearly \$4 billion a year for peace is cheap compared to the more than \$40 billion budget spent on other kinds of defense which cannot be used in underdeveloped countries. The committee sees unrest cropping up in one underdeveloped country after another, sparked by hunger and Communist agitation, if better systems of nutrition are not introduced.

### Wins Indiana Contest With 60-Bushel Yield

W. R. ORR, Tipton, won the 1960 Indiana soybean 5-acre yield contest. The 42-year-old Tipton County corn-hog farmer checked 60 bushels per acre on his best 5 from a 40-acre field.

Runner-up was John H. Wyckoff, Porter County, with a yield of 57.5 bushels per acre. The 1959 state winner was Floyd Duncan, Jr., Lake County, with a yield of 61.9 bushels per acre.

The estimated 1960 average soybean yield for Indiana is 27 bushels per acre.

Orr planted Harosoy, the most widely grown variety in Indiana, in 38-inch rows May 28. The field was in corn last year. He applied 80 pounds of 8-32-0 fertilizer in the row

at planting time. Orr rotary hoed the field once, cultivated it three times and hand hoed weeds that cultivation didn't kill.

Orr said the 40-acre bean field grossed him \$100 an acre.

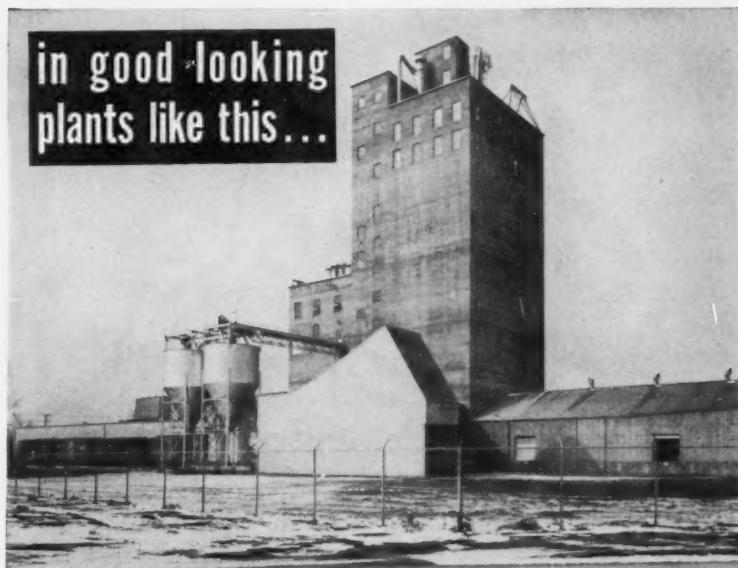
Orr's yield is the sixth of 60 or more bushels in the 21-year history of the contest. Winners in the first 5 years of the competition were all under 50 bushels, according to Gilbert P. Walker, Purdue University extension agronomist. The contest is sponsored by Purdue's extension service and the Indiana Crop Improvement Association. One hundred sev-

enty-three farmers had their yields checked in 1960 under supervision of their county agricultural agents.

Other high yields in the 1960 contest:

Fermen Keesling, Henry County, 56.5 bushels per acre; Marvin Shopmeyer, Clay County, 54.5 bushels; Clarence Mesker, Vanderburgh County, and Walter R. Mosbaugh, Hamilton County, 54 bushels; Lyle Patchett, Lake County, 53.5 bushels; and L. K. Wyckoff, Porter County, Russell Gillen Jr., Benton County, and James J. Buck, Tippecanoe County, each 53 bushels.

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W. R. ORR, Indiana's 1960 soybean yield champion (left), and Walter Clary, Tipton County agent, examine a sample of the champ's prize winning beans.



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**Burdette**—G. A. Hale, Hale Seed Farms, 8,000 bu. registered Hale Ogden No. 2; 1,000 bu. uncertified Hale No. 3; 1,000 bu. uncertified Hale No. 7.  
**Scott**—Robert L. Dortch Seed Farms 20,000 bu. certified Dortchsoy 2A; 7,500 bu. certified Dortchsoy 31; 10,000 bu. certified Hood; 15,000 bu. certified Lee; 25,000 bu. certified Jackson.

**Wynne**—Holleman Seed Service Co., Rt. 1, Box 129, 12,000 bu. certified Lee; 8,000 bu. certified Jackson; 1,000 bu. registered Hill; 1,000 bu. certified Hill; uncertified Lee and Jackson.

### ILLINOIS

**Farina**—Ging, Inc., 25,000 bu. uncertified Clark; 5,000 bu. certified Shelby; 5,000 bu. uncertified Shelby.

**Kankakee**—A. L. Book & Co., P. O. Box 388, 200,000 bu. uncertified Harosoy.

**Mattoon**—Monroe Farrar, Rt. 4, 1,250 bu. certified or uncertified Shelby.

**Mundelein**—Huebsch Seed Farms, 135 Midlothian Rd., Lindarin, Hawkeye, Ford, Harosoy, Chippewa, all certified.

**Pontiac**—Wilken Seed Grains, Rt. 4, supplies of certified and noncertified Lindarin, Harosoy, Hawkeye, Shelby, and Adams.

**MINNESOTA CERTIFIED SOYBEAN** seed. Merit: germination 98, purity 99.75. Lindarin: germination 97, purity 99.89. Above varieties hand rogued. Packed in new 1 and 1½ bushel bags. Sewed, tagged and sealed. Merlin Knorr, Madison, Minn.

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**EQUIPMENT WANTED—USED SEED** cleaning equipment, cleaners, elevators, separators, etc. Chester C. Clift, Route 1, Coshutta, La., Phone WE 2-4763.

**FOR SALE—FAIRBANKS-MORSE** 150-ton, 50-ft. railroad track scale. Excellent condition. Write Cassidy Feed Mills, Box 95, Richardson, Tex.

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**San Jose**—Kelly Seed Co., 3,000 bu. certified Hawkeye; 4,000 bu. certified Harosoy; 1,000 bu. certified Clark; 8,000 bu. registered No. 2 Shelby; also 7,000 bu. registered Lindarin.

**Villa Grove**—Turner Seed & Supply Co., Phone 7621, certified Lindarin, Harosoy, Adams, Shelby, Clark.

**Wilmington**—James J. Gorman, Rt. 66A, 1,000 bu. registered No. 1 Lindarin; 3,000 bu. registered No. 2 Harosoy.

### INDIANA

**Bluffton**—Gordon & Walburn, Rt. 1, Ph. Liberty Center 49J1 or 49J5, 900 bu. certified Lindarin; 800 bu. uncertified Lindarin; 600 bu. certified Shelby.

**Bluffton**—Earl F. Rudy, Rt. 2, 400 bu. certified Shelby; 400 bu. certified Lindarin.

**Valparaiso**—Wykoff Hybrid Corn Co., registered No. 1 Chippewa; registered Lindarin; certified Blackhawk.

**West Lafayette**—Agricultural Alumni Seed Improvement Association, Inc., 2336 Northwestern Ave., foundation seed for certified production of Shelby, Lindarin and Clark.

### IOWA

**Albert City**—John Helgeson, Rt. 1, 750 bu. certified Ford.

**Clemons**—Donald M. Rogers, 2,000 bu. certified Ford.

**Hudson**—Strayer Seed Farms, 1,500 bu. certified Ford; 1,200 bu. certified Chippewa.

**Marcus**—Sand's Seed Service, 20,000 bu. certified Hawkeye; 40,000 bu. uncertified Hawkeye; 3,000 bu. uncertified Chippewa.

### KANSAS

**Columbus**—Farmers Cooperative Association, Box 80, 20,000 bu. uncertified Clark.

### MINNESOTA

**Benson**—Munson Seed Co., 3,000 bu. certified 1st gen. Chippewa; 400 bu. certified 1st gen. Blackhawk; 2,000 bu. uncertified Comet.

**Bird Island**—A. A. Ziller, 200 bu. certified and registered Ottawa Mandarin; 200 bu. certified and registered Capital; 400 bu. certified Norchief; 300 bu. registered Comet; 1,000 bu. certified and registered Chippewa; 300 bu. certified Lindarin.

**Hanska**—J. H. Schrooten, Rt. 2, 4,000 bu. certified 1st gen. Lindarin; 500 bu. Ford; 2,000 bu. Chippewa; 600 bu. Comet; 800 bu. Harosoy; also Blackhawk, Ottawa Mandarin, and Norchief, all certified or registered.

### MISSISSIPPI

**Indianola**—Bobshaw Pedigreed Seed Co., P. O. Box 483, 25,000 bu. registered Rebel.

### MISSOURI

**Hayti**—Jacob Van Dyke, Rt. 1, Box 443, 1,000 bu. registered and certified Hill.

**Louisiana**—Farm Supply Co., noncertified Clark; noncertified Shelby; good quality and germination.

**Painton**—Odus Strobel, Rt. 1, 4,500 bu. certified Hill.

**St. Joseph**—Jim Pitts, Rt. 6, Box 366A, 4,000 bu. uncertified Clark.

**St. Louis 24**—Cypress Land Farms Co., 8129 Delmar, 1,000 bu. noncertified Lee; 2,000 bu. noncertified Ogden; 2,000 bu. noncertified Clark; 500 bu. noncertified Perry; 500 bu. noncertified Shelby.

### NEBRASKA

**Elk City**—Wahlgren Seed Farms, 1,200 bu. certified Ford.

**West Point**—Fred A. Meyer, Rt. 2, Box 98, 175 bu. certified Ford; 200 bu. uncertified Chippewa.

### NORTH CAROLINA

**Aulander**—Herbert Jenkins, 500 bu. certified Hill; 500 bu. certified Hood.

**Selma**—Gurley Milling Co., Box 488, 5,000 bu. uncertified Lee; 2,500 bu. certified and registered Lee; 5,000 bu. uncertified Jackson; 1,000 bu. certified Jackson; 1,000 bu. uncertified and certified Hood; 500 bu. certified Hill; 2,500 bu. uncertified Roanoke; 1,000 bu. uncertified Roanoke; 1,000 bu. uncertified Ogden; 3,000 bu. uncertified J.E.W. 45; 2,500 bu. uncertified C.N.S. 4 and 24; 500 bu. Wood's Yellow; 500 bu. Tokyo and other varieties.

### OHIO

**Arcanum**—Tenney Seed Co., Rt. 2, new phytophthora root rot resistant varieties—100 bu. certified Henry; 100 bu. certified Ross; 500 bu. certified Madison.

**Green Camp**—Green Camp Cooperative Elevator Co., 2,000 bu. registered Lindarin.

**Sylvania**—Harold Creque, Rt. 1, Box 291A, 800 bu. uncertified Lindarin.

### OKLAHOMA

**Wagoner**—Bob Jeffrey Co., Inc., Box 308, 350 bu. registered Hood; 600 bu. registered Lee; 600 bu. noncertified Clark; 1,200 bu. noncertified Hood; 1,000 bu. noncertified Lee.

### VIRGINIA

**Clay Bank**—Louis Groh & Son, Inc., 12,000 bu. uncertified Lee; 500 bu. uncertified Hood; 6,800 bu. uncertified Black Wilson; 9,000 bu. uncertified Hill; 15,000 bu. Ogden.

**Norfolk 15**—Davis Grain Corp., Box 7595, certified Hood, Lee, Ogden; registered Hill.

## ADVERTISE YOUR SOYBEAN SEED

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...and I've increased my yield 5 to 10 bushels an acre since I've been using ORTHO Soybean Seed Protectant. Treated beans mature a lot faster, so you don't run the risk of losing the harvest with the frost. And you get away from green pods." Grower Harold Hoge of Scribner, Dodge County, Nebraska, knows what he's talking about. Last year, even when heavy rains caused crusted ground right after planting, he got a fine stand. **ORTHO Soybean Seed Protectant** contains ORTHOCIDE (captan) to protect seed from blight, damping off and decay. It coats the seed and gives added protection in the surrounding soil. A built-in lubricant aids seed-flow, prevents cracking and splitting, insures uniform planting. Mix it right in the planter box with the seed. **The 1 lb. can costs \$1.25, treats seed to plant about 4 acres.**

T. M.'s REG. U.S. PAT. OFF.; ORTHO, ORTHOCIDE ON ALL CHEMICALS, READ DIRECTIONS AND CAUTIONS BEFORE USE.


Mr. Hoge in his soybean acreage. He uses ORTHO Soybean Seed Protectant at the rate of 1 lb. to 5 bushels. Cost averages about 45¢ an acre.



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## IN THE MARKETS

**STOCKS ON FARMS.** Jan. 1 farm stocks of soybeans were estimated at 172 million bushels. This is about one-eighth below last year and the lowest Jan. 1 farm stocks since 1957, but still more than one-third above average. The government reseal program was not continued for the 1959 crop, therefore there are no soybeans stored on farms this year under the reseal program. Last year at this time nearly 14 million bushels were stored on farms under this program.

From a supply of 562.2 million bushels on Oct. 1, 1960 (1960 production of 558.8 million bushels plus 3.4 million bushels farm carryover) the movement from farms for the October-December quarter amounted to about 390 million bushels. This compares with 354 million during the same quarter in 1959 from a slightly smaller supply and is the highest disappearance of record for the period. A relatively small amount of soybeans was combined and processed before Oct. 1. This quantity is included in the apparent disappearance for the October-December quarter.

Farm stocks on Jan. 1 were lower than last year in the heavy producing North Central area; however, the area still had 85% of the U. S. total. Farm stocks were also lower in the North Atlantic and South Central areas. Only in the South Atlantic States were stocks above a year earlier.

Soybean stocks on farms—Jan. 1 (1,000 bu.)							
Average			Average				
1950-59	1960	1961	1950-59	1960	1961		
N.Y. ....	64	38	48	Md. ....	643	556	826
N.J. ....	237	361	281	Va. ....	1,174	1,551	1,594
Pa. ....	207	254	132	N. C. ....	1,643	1,945	2,921
Ohio ....	9,732	12,512	11,129	S. C. ....	906	2,131	2,922
Ind. ....	16,474	24,045	21,723	Ga. ....	211	390	430
Ill. ....	34,127	52,372	43,961	Fla. ....	50	201	196
Mich. ....	1,539	3,240	2,313	Ky. ....	805	1,483	712
Wis. ....	584	879	691	Tenn. ....	792	2,117	840
Minn. ....	16,060	22,500	18,810	Ala. ....	160	441	501
Iowa ....	23,208	32,017	30,943	Miss. ....	1,858	4,569	3,881
Mo. ....	8,080	15,481	10,079	Ark. ....	2,564	8,519	8,575
N. Dak. ....	600	1,526	1,144	La. ....	234	355	401
S. Dak. ....	944	788	816	Okla. ....	96	189	454
Nebr. ....	1,053	2,102	1,418	Texas ....	31	226	109
Kans. ....	1,194	2,734	3,868	U. S. ....	125,747	196,222	172,444
Del. ....	472	700	726				
Crop Reporting Board, AMS, USDA							

Crop Reporting Board, AMS, USDA

**STOCKS.** Soybean stocks of 424 million bushels in all storage positions on Jan. 1 were the third highest of record for the date, the U. S. Department of Agriculture reports. The current stocks are exceeded only by the 452 million of a year ago and the 471 million bushels on hand Jan. 1, 1959. Most of the reduction from last year was in farm storage as the off-farm storage was nearly as large as a year earlier.

Stocks on Jan. 1 indicated a disappearance during the October-December quarter of 157 million bushels

from a supply of 582 million bushels (carryover of 23.2 million plus 1960 production of 558.8 million bushels). During the period 110 million bushels were processed for oil and about 55 million bushels were exported. This totals 165 million bushels or a difference of about 8 million bushels between indicated and actual disappearance. In most years such indicated differences on Jan. 1 have disappeared by the end of the marketing year when the final check is made, USDA says.

Stocks of soybeans, Jan. 1, 1961, with comparisons (1,000 bu.)

	Jan. 1 av. 1950-59	Jan. 1 1960	Oct. 1 1960	Jan. 1 1961
On farms <sup>1</sup> .....	125,747	196,222	3,395	172,444
Commodity Credit Corp. <sup>2</sup> .....	328	327	843	291
Processing plants <sup>4</sup> .....	71,813	104,623	5,381	110,603
Mills, elev. & whses. <sup>1, 3</sup> .....	78,465	150,727	13,590	141,155
Total .....	276,352	451,899	23,209	424,493

<sup>1</sup> Estimates of the crop reporting board. <sup>2</sup> Owned by CCC and stored in bins or other storages owned or controlled by CCC; other CCC-owned grain is included in the estimates by positions. <sup>3</sup> All off-farm storages not otherwise designated, including flour mills and terminal elevators. <sup>4</sup> January estimates reported by Census Bureau. October estimates reported by crop reporting board.

Soybeans—total and off-farm stocks, Jan. 1 and Oct. 1 (1,000 bu.)

	Off-farm total <sup>1</sup>		Total all positions <sup>2</sup>	
	Jan. 1, 1960	Oct. 1, 1960	Jan. 1, 1961	Oct. 1, 1961
Ohio .....	20,185	137	19,010	32,697
Ind. ....	*	363	16,856	*
Ill. ....	56,423	2,781	56,962	108,795
Minn. ....	24,516	963	20,447	47,016
Iowa ....	43,679	10,097	32,051	75,696
Mo. ....	*	594	*	1,093
S. Dak. ....	838	324	321	1,626
N. C. ....	4,240	474	5,247	6,185
Tenn. ....	13,531	*	14,941	15,648
Miss. ....	9,843	3	10,622	14,412
Ark. ....	16,727	6	18,599	25,246
Other* .....	65,695	4,072	56,993	124,578
U. S. ....	255,677	19,814	252,049	451,899

\* Included in other states to avoid disclosing individual operations. <sup>1</sup> Includes stocks at mills, elevators and warehouses, terminals and those owned by Commodity Credit Corp. which are in bins and other storages under CCC control. <sup>2</sup> Off-farm total plus farm stocks.

**MELLORINE.** Production of mellorine and other frozen desserts made with fats and oils other than milkfat in December was 2,205,000 gallons, reports Agricultural Marketing Service. This was 8% less than in December 1959. The 12-month total production in 1960 was 7% larger than that of 1959.

Production of "mellorine-type" frozen desserts, United States 1960

	1954-58 average <sup>1</sup>		1959 <sup>1</sup>		Estimated Change from: 1954-58 av. 1959	
	Thousand gallons	1960	1959	1960	Percent	Percent
January .....	1,862	2,243	2,273	2,595	+39	+14
February .....	2,098	2,341	2,464	2,920	+39	+19
March .....	2,605	2,767	3,360	3,400	+31	+1
April .....	2,900	3,425	3,618	3,915	+35	+8
May .....	3,435	4,120	4,173	4,405	+28	+6
June .....	3,785	4,397	4,850	5,325	+41	+10
July .....	4,103	4,782	5,034	4,990	+22	-1
August .....	3,959	4,475	4,736	5,395	+36	+14
September .....	3,192	3,819	4,167	4,300	+35	+3
October .....	2,616	3,022	3,204	3,520	+35	+10
November .....	1,921	2,234	2,375	2,760	+44	+16
December .....	1,716	2,065	2,402	2,205	+28	-8
Twelve-month total .....	34,192	39,690	42,656	45,730	+34	+7

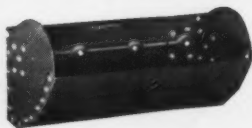
<sup>1</sup> From enumerations.

**INSPECTIONS.** Inspected receipts, by grade and percent, reported by Agricultural Marketing Service.<sup>1</sup>

Grade	December 1960 <sup>2</sup>		November 1960		December 1959		Oct.-Dec. 1960		Oct.-Dec. 1959	
	1,000 bu.	Pct.	1,000 bu.	Pct.	1,000 bu.	Pct.	1,000 bu.	Pct.	1,000 bu.	Pct.
No. 1 .....	5,521	16	12,203	17	4,137	12	56,020	23	35,703	17
No. 2 .....	16,603	47	34,412	48	16,242	47	112,079	47	101,939	49
No. 3 .....	9,577	28	17,233	24	10,275	30	49,179	20	50,102	24
No. 4 .....	2,579	7	5,601	8	2,746	8	17,930	8	13,273	7
Sample .....	812	2	1,739	3	1,153	3	5,145	2	5,975	3
Total .....	35,092	100	71,188	100	34,553	100	240,353	100	206,992	100

<sup>1</sup> Carlot receipts have been converted to bushels on the basis that 1 carlot equals 1,750 bushels. <sup>2</sup> Of the December receipts, 5,250 bushels were black, 500 brown, 400 mixed and the remainder yellow soybeans. Inspections of soybeans in December included 9,238,055 bushels as cargo lots, 4,292,680 bushels as truck receipts, and the balance as carlot receipts. Based on reports of inspections by licensed inspectors at all markets.

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**EXPORTS.** Preliminary data on U. S. exports of soybeans, soybean and cottonseed oils, and soybean and cottonseed cakes and meals for November 1960, with comparable data for November 1959 and cumulative totals for October-November in the marketing years 1959-60 and 1960-61, by USDA's Foreign Agricultural Service.

Unit	November		October-November <sup>1</sup>	
	1959 <sup>1</sup>	1960	1959-60	1960-61
Soybeans .....bu.	20,415,350	22,660,479	32,503,267	36,710,710
Soybean oil:				
Crude .....lb.	35,533,813	64,332,922	47,622,087	88,756,637
Refined but not further processed .....lb.	10,400,973	1,693,469	23,229,135	8,684,718
Refined, deodorized and hydrogenated .....lb.	14,545,616	9,692,277	21,575,144	20,003,729
Cottonseed oil:				
Crude .....lb.	40,205,641	46,381,527	64,355,611	49,891,475
Refined but not further processed .....lb.	4,968,207	5,085,141	41,127,286	11,614,891
Refined, deodorized and hydrogenated .....lb.	1,203,796	1,727,073	5,296,407	4,362,891
Cottonseed cake and meal .....s.t.	18,202	11,261	57,752	26,363
Soybean cake and meal .....s.t.	76,855	65,043	133,951	117,109

<sup>1</sup>Includes any revisions made by the Bureau of the Census.

**Oilcakes and meals: West Germany, supply and distribution, year beginning July 1, 1958-60 (1,000 short tons)**

	1958-59	1959-60 <sup>1</sup>	1960-61 <sup>2</sup>
Supply:			
Stocks, July 1.....	82	112	130
Production .....	956	1,192	1,260
Imports .....	758	1,040	1,000
Total .....	1,796	2,344	2,390
Distribution:			
Exports .....	232	274	250
Consumption .....	1,452	1,940	2,030
Stocks, June 30 .....	112	130	110
Total .....	1,796	2,344	2,390

<sup>1</sup> Preliminary. <sup>2</sup> Forecast.

**Cottonseed, linseed, soybean cake and meal: U. S. exports by country of destination, October-November 1959 and 1960 (tons)**

	Cottonseed cake and meal		Linseed cake and meal		Soybean cake and meal	
	Oct.-Nov. 1960	Oct.-Nov. 1959	Oct.-Nov. 1960	Oct.-Nov. 1959	Oct.-Nov. 1960	Oct.-Nov. 1959
Canada .....	18	100	350	60	42,873	52,242
Mexico .....	.....	.....	.....	.....	2,716	1,525
Cuba .....	100	.....	.....	.....	4,750	2,617
Venezuela .....	.....	.....	.....	.....	1,248	815
Sweden .....	.....	608	.....	.....	30	823
Norway .....	.....	.....	.....	.....	2,806	.....
Denmark .....	11,213	17,421	.....	.....	88	890
United Kingdom .....	11,453	14,618	.....	.....	172	508
Ireland .....	2,300	5,193	.....	.....	.....	109
Netherlands .....	219	8,958	16,813	17,279	22,179	26,602
Belgium & Luxembourg .....	.....	3,720	.....	200	12,019	11,995
France .....	.....	1,787	533	.....	3,245	2,202
West Germany .....	1,060	5,111	3,209	4,762	13,274	13,990
Spain .....	.....	.....	.....	.....	.....	2,187
Italy .....	.....	.....	.....	.....	2,386	8,482
Australia .....	.....	.....	.....	.....	1,895	.....
Philippines .....	.....	.....	.....	.....	4,599	2,987
Israel .....	.....	.....	.....	.....	1,200	.....
Other .....	.....	236	264	165	1,629	5,977
Total .....	26,363	57,752	21,169	22,466	117,109	133,951

Bureau of the Census.

**Soybeans: Inspections for export by ports and areas December 1960 (1,000 bu.)**

Lake Ports		Gulf	
Chicago .....	732	Mobile .....	4,198
Toledo .....	1,084	New Orleans .....	4,813
Subtotal .....	1,816	Port Allen .....	2,995
		Houston .....	75
		Subtotal .....	12,081
Atlantic		Totals	
Philadelphia .....	304	December 1960 .....	17,811
Baltimore .....	1,968	Jan.-Dec. 1960 .....	144,990
Norfolk .....	1,642	Jan.-Dec. 1959 .....	123,713
Subtotal .....	3,914		

Based on weekly reports of inspections for export by licensed inspectors and does not include rail and truck movement to Canada or Mexico. Agricultural Marketing Service.



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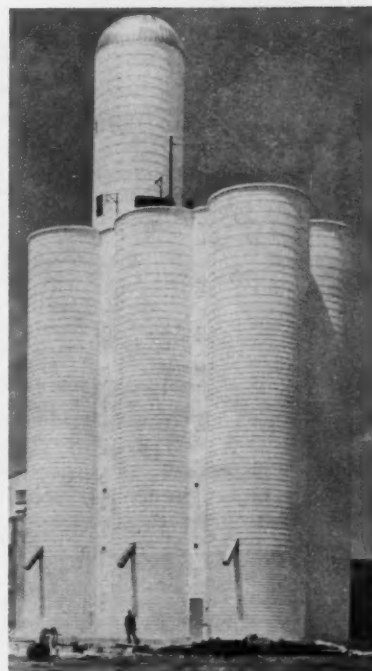
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**Oilseed meals: Production, stocks, foreign trade, and domestic disappearance, October-November 1959 and 1960**  
(1,000 tons)

	Stocks <sup>1</sup> Oct. 1	Pro- duction	Imports <sup>2</sup>	Exports <sup>2</sup>	Domestic disap- pearance	Stocks <sup>1</sup> Nov. 30
<b>October-November 1960</b>						
Soybean .....	82.8	1,694.8	0	122.1	1,541.4	114.1
Cottonseed .....	137.1	703.0	5.8	30.1	617.0	198.8
Linseed .....	29.4	80.6	....	7.6	68.3	34.1
Copra .....	6.0	25.1	0.6	....	31.7	....
Peanut .....	1.8	9.0	....	....	8.5	2.3
Total .....	257.1	2,512.5	6.4	159.8	2,266.9	349.3
<b>October-November 1959</b>						
Soybean .....	58.5	1,661.1	0	134.0	1,506.4	79.2
Cottonseed .....	97.0	702.9	6.2	57.8	635.2	113.1
Linseed .....	33.3	86.6	0.6	22.5	59.1	38.9
Copra .....	....	23.9	0.9	....	24.8	....
Peanut .....	1.8	9.6	0	....	9.9	1.5
Total .....	190.6	2,484.1	7.7	214.3	2,235.4	232.7

Note: Dash indicates data is not available. <sup>1</sup>Stocks at processing plants only. <sup>2</sup>Partly estimated.

**Soybeans: Inspections for export by coastal areas and country of destination December 1960 (1,000 bu.)**

Destination December 1960 (1,000 Barrels)			
Great Lakes		Gulf	
Canada .....	1,816	Denmark .....	597
Subtotal .....	1,816	Netherlands .....	3,423
Atlantic		Belgium .....	574
Norway .....	311	West Germany .....	1,210
United Kingdom .....	640	Italy .....	971
Netherlands .....	116	Israel .....	75
Belgium .....	129	Japan .....	5,101
Japan .....	918	Korea .....	130
Israel .....	968	Subtotal .....	12,081
Other .....	832	Grand Total .....	17,811
Subtotal .....	3,914	Total Jan.-Dec. 1960 .....	144,990
		Total Jan.-Dec. 1959 .....	123,713

Based on weekly reports of inspections for export by licensed inspectors and does not include rail or truck movement to Canada or Mexico. In some cases, the ultimate destination of the soybeans exported is not shown on the inspection reports. Therefore, the quantity for each country may vary from official Census data which are based on custom declarations. Agricultural Marketing Service.

**Soybeans, edible oils, and oilseed cakes and meals: U. S. exports, year beginning Oct. 1, 1958 and 1959; October-November 1959 and 1960**

	Unit	1958-59	1959-60 <sup>1</sup>	1959-60 <sup>2</sup>	1960-61 <sup>2</sup>
Soybeans .....	mil. bu.	110.1	141.6	32.5	36.7
Oil equivalent .....	mil. lbs.	1,208.6	1,554.8	356.9	403.1
Meal equivalent .....	1,000 s. t.	2,608.7	3,292.3	755.7	862.7
<b>Edible oils:</b>					
Soybean .....	mil. lbs.	930.4	952.8	92.4	117.4
Cottonseed .....	mil. lbs.	404.2	503.3	110.8	65.9
Total .....	mil. lbs.	1,334.6	1,456.1	203.2	183.3
<b>Cakes and meals:</b>					
Soybean .....	1,000 s. t.	512.2	652.3	134.0	117.1
Cottonseed .....	1,000 s. t.	27.3	140.2	57.8	26.4
Linseed .....	1,000 s. t.	31.2	62.6	22.4	21.2
Total <sup>2</sup> .....	1,000 s. t.	581.0	870.5	216.5	167.1

<sup>1</sup> Preliminary. <sup>2</sup> Includes peanut cake and meal and small quantities of other cakes and meals. Compiled from records of the Bureau of the Census by Foreign Agricultural Service, U. S. Department of Agriculture.

**Oilseed cake and meal: U. S. exports, November 1960 (tons)**

	Nov. 1960	Monthly Oct. 1960	Nov. 1959	Season to date Oct.-Nov. 1960	Season Oct.-Nov. 1959	Season Oct.-Sept. 1959-60
Soybean .....	65,043	52,066	76,855	117,109	133,951	652,300
Cottonseed .....	11,261	15,102	18,202	26,363	57,752	140,196
Linseed .....	17,580	3,589	10,305	21,169	22,466	62,574

Bureau of the Census.

**Title I, P. L. 480 exports for July 1960-December 1960**

	December 1960			July 1960-December 1960		
	Metric tons	Unit	Quantity	Metric tons	Unit	Quantity
Cottonseed oil .....	2,521	lb.	5,558,000	12,489	lb.	27,529,000
Soybean oil .....	20,686	lb.	45,604,000	162,671	lb.	358,629,000

Foreign Agricultural Service, U. S. Department of Agriculture.

**PRICE SUPPORT.** Totals of 1960 crop soybeans put under support through December 1960 compared to total of 1959-crop soybeans put under support through December 1959, reported by Agricultural Marketing Service (bushels).

	Warehouse-stored loans	Farm-stored loans	Purchase agreements	Total put under support through Dec. 31, 1960	Total put under support through Dec. 31, 1959
	8,317,354	13,463,815	98,601	21,879,770	32,851,672

**PRICES.** Average price for soybeans received by farmers, effective parity, and support rates, reported by Agricultural Marketing Service (dollars per bushel).

	Average farm price			Effective parity		National average price support rate	
	Dec. 15 1960	Nov. 15 1960	Dec. 15 1959	Dec. 15 1960	Dec. 15 1960	1960 crop	1959 crop
	1.99	1.96	1.98	2.90	69	1.85	1.85

Average farm and parity prices from crop reporting board.

**Soybean prices compared with market value of soybean oil and meal**

	Soybean oil		Soybean meal		Value of oil	Market price	Spread between
	Average price at crushing plant	Value from bu. of soybeans <sup>1</sup>	Bulk price from bu. of soybeans <sup>1</sup>	Value from bu. of soybeans <sup>1</sup>	of oil and meal	No. 1 yellow soybeans	price and value of oil & meal
	Cts. per pound	Dollars	Dollars	Dollars	Dollars	Ill. pts.	Cents
Dec. 1960	9.9	1.09	51.25	1.20	2.29	2.15	14
Nov. 1960	10.0	1.10	44.50	1.05	2.15	2.05	10
Oct. 1960	9.3	1.02	48.95	1.15	2.17	2.04	13
Sept. 1960	9.0	0.99	53.75	1.26	2.25	2.07	18
Aug. 1960	9.4	1.03	50.30	1.18	2.21	2.13	8
Dec. 1959	7.7	0.85	58.70	1.38	2.23	2.08	15

<sup>1</sup>Based on assumption that a bushel of soybeans yields 11 pounds of oil and 47 pounds of meal. Note: This table is for statistical comparison only. It does not reflect actual operating margins since prices are simple averages and do not take into account location differentials or actual purchases and sales of soybeans, soybean oil or soybean meal. Agricultural Marketing Service.

**PROCESSING OPERATIONS.** Reported by Bureau of the Census for November and December 1960.

Primary products except crude oil at crude oil mill locations: Production, shipments and transfers, and stock, December 1960-November 1960 (1,000 short tons)

	Production	Shipments and transfers	Stocks end of month
	Decem-ber 1960	Novem-ber 1960	Dec. 31, 1960
Soybean:	874.3	851.6	883.0
Cake and meal .....	12.4	13.1	12.3
Millfeed (hull meal) ..	12.4	13.1	12.3

Soybeans: Net receipts, crushings, and stocks at oil mills, by states, December 1960-November 1960 (1,000 short tons)

	Net receipts at mills <sup>1</sup>		Crushed or used		Stocks at mills	
	Decem-ber 1960	Novem-ber 1960	Decem-ber 1960	Novem-ber 1960	Dec. 31, 1960	Nov. 30, 1960
U. S. ....	777.1	1,799.4	1,130.7	1,102.2	3,318.1	3,671.7
Arkansas .....	18.5	156.8	32.0	27.6	175.6	189.2
Illinois .....	218.3	262.9	351.0	346.9	653.1	785.8
Indiana .....	44.7	130.5	98.5	94.7	329.8	383.5
Iowa .....	122.3	180.3	198.4	198.7	358.4	434.4
Minnesota .....	75.8	66.0	73.2	68.3	133.1	130.5
Mississippi .....	32.8	172.1	30.5	37.2	226.4	224.1
Missouri .....	(2)	(2)	(2)	(2)	(2)	(2)
Nebraska .....	(2)	(2)	(2)	(2)	(2)	(2)
North Carolina .....	41.4	(2)	15.3	(2)	104.7	78.7
Ohio .....	53.7	82.4	95.7	97.0	324.3	366.3
Tennessee .....	74.9	324.6	85.1	78.9	408.2	418.4
All other .....	94.7	423.8	151.0	152.9	604.5	660.8

Note: Detail figures may not add to totals because of independent rounding. <sup>1</sup> Net receipts for each state are derived from the quantity of beans crushed and net change in stocks. <sup>2</sup> Included in "All other" to avoid disclosure of figures for individual companies.

**Soybean products: Production and stocks at oil mill locations, by states, December 1960-November 1960**

	Crude oil (millions of pounds)		Cake and meal (thousands of tons) <sup>1</sup>	
	Production	Stocks	Production	Stocks
	Decem-ber 1960	Novem-ber 1960	Decem-ber 1960	Novem-ber 1960
U. S. ....	409.8	401.1	92.6	106.2
Arkansas .....	11.6	9.8	2.1	1.5
Illinois .....	131.0	129.6	36.3	33.5
Indiana .....	35.5	35.4	6.2	4.5
Iowa .....	70.2	70.6	13.0	11.6
Minnesota .....	26.1	24.0	6.2	23.8
Mississippi .....	11.2	13.7	1.5	2.5
Missouri .....	(2)	(2)	(2)	(2)
Nebraska .....	(2)	(2)	(2)	(2)
N. Carolina .....	5.1	(2)	0.7	12.3
Ohio .....	34.5	34.6	7.4	7.5
Tennessee .....	30.7	28.3	5.2	9.9
All other .....	53.9	55.1	14.7	10.7

Note: Detail figures may not add to totals because of independent rounding. <sup>1</sup> Includes mill feed (hull meal). <sup>2</sup> Included in "All other" to avoid disclosure of figures for individual companies.



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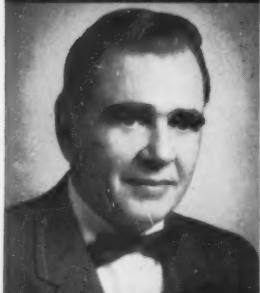
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